

Appointment

From: Owscheduling [Owscheduling@epa.gov]
Sent: 6/21/2021 1:12:24 PM
To: Aguirre, Janita [Aguirre.Janita@epa.gov]
Subject: Steam Electric 2020 Rule Decision for Reconsideration
Attachments: Request 198 - Steam Electric 2020 Rule Decision for Reconsideration.pdf
Location: Microsoft Teams Meeting
Start: 6/22/2021 4:00:00 PM
End: 6/22/2021 5:00:00 PM
Show Time As: Tentative

Required Attendees: Fox, Radhika; Benita Best-Wong; Hoffer, Melissa; Nagle, Deborah; Wood, Robert (Wood.Robert@epa.gov); Scozzafava, MichaelE; Damico, Brian; Benware, Richard; Huff, Lisa; Neugeboren, Steven; Levine, MaryEllen; Zomer, Jessica; Flanders, Phillip; Allen, Ashley; Covington, James
Optional Attendees: Weyer, Erica; Skane, Elizabeth; Aguirre, Janita

Microsoft Teams meeting

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Steam Electric ELGs

6/29/2021 Briefing for Administrator Regan

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Purpose and Drivers of this Meeting

- **Purpose:** to present options for responding to litigation on the 2020 Steam Electric Reconsideration Rule (2020 rule)
- **Drivers:**
 - Litigation on 2020 Rule (*Appalachian Voices v. EPA*, 4th Cir.)
 - Current abeyance expires on July 26
 - EPA/DOJ represented that EPA expected to make a decision to revise or not revise the 2020 rule by this time
 - EO 13990
 - 2020 Steam Electric Reconsideration Rule is listed as a rule for EPA to consider revisions

Ex. 5 Deliberative Process (DP)

See Appendix A for information on the litigation

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Steam Electric Power Plant Wastestreams

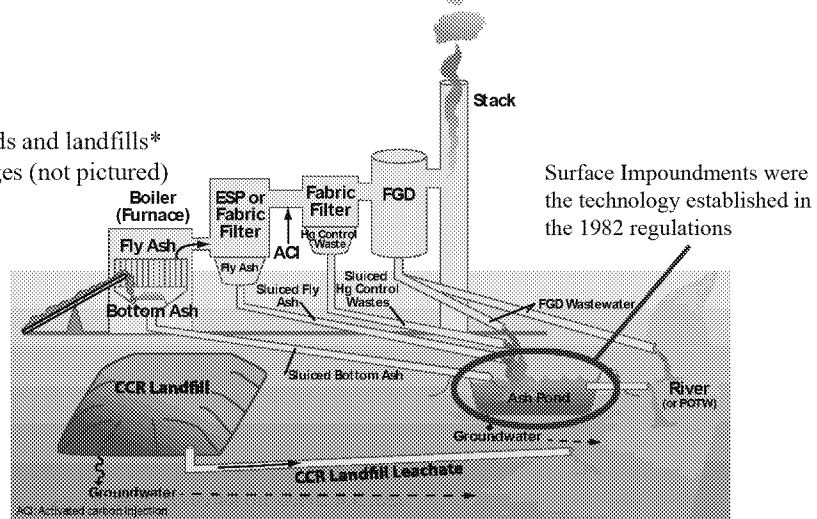
- FGD wastewater
- Fly ash transport water
- BA transport water
- Mercury (Hg) control waste
- Leachate from ash/FGD ponds and landfills*
- Gasification process discharges (not pictured)

Notes:

- The 2015 rule also addressed legacy wastewaters (any of the above wastewaters generated before the implementation dates for the new, more stringent BAT)*
- Companion coal combustion residual (CCR) rule regulates solid waste disposal

*Remanded in *SWEPCO v. EPA*,
(5th Cir. 2019)

See **Appendix B** for additional history on the ELGs prior to 2020



6/16/2022

Background: What Changed from 2015-2020

- The 2020 rule **revises the technology basis, limitations, and compliance dates** established in the 2015 rule
 - Raised some FGD wastewater limits and lowered others
 - Allowed site-specific discharges of bottom ash transport water
 - Extended compliance dates for both wastestreams by 2 years
- The 2020 rule **creates new subcategories** (point source discharges subject to differentiated treatment) with less stringent limitations
 - High FGD flow power plants
 - Low-utilization electric generating units (i.e., “peakers”); and
 - Permanent cessation of coal combustion by 2028 (i.e., retiring or converting fuels)
 - **Driving some coal plants to accelerate retirement dates to avoid incurring further treatment costs**

• **Ex. 5 Deliberative Process (DP)**

See Appendix C for further details on the specific changes made in the 2020 rule

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Water Pollution Reductions: FGD Wastestream

- **2020 Rule**

Ex. 5 Deliberative Process (DP)

- **Potential New Rulemaking**

Ex. 5 Deliberative Process (DP)

See Appendix D for additional details on the numeric estimates above

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Impacts to Environmental Justice Communities

- The 2020 rule environmental justice analysis evaluated the demographics of three separate sets of populations:
 - Individuals surrounding power plants with changing air pollution levels
 - Individuals surrounding downstream surface waters with changing water pollution levels; and
 - Individuals served by downstream drinking water treatment plants with changing water pollution levels
- What could we learn from additional analyses?

Options

Ex. 5 Deliberative Process (DP)

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Draft Rulemaking Schedule

Ex. 5 Deliberative Process (DP)

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Intersection with Other EPA Regulatory Actions

Ex. 5 Deliberative Process (DP)

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Ex. 5 Deliberative Process (DP)

Timing and Next Steps

- **Timing**: Need a decision by July 14 to give OGC and DOJ sufficient time to prepare the court filings prior to when the abeyance ends on July 26.
- **Next Steps**:
 - July 15-23 – Develop public announcement and other press materials
 - July 26 – EPA responds to the Fourth Circuit & announces decision to public

Appendix A: **Current Litigation Details**

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Current Litigation Details

- Two petitions for review filed by (1) Clean Water Action; Environmental Integrity Project; Sierra Club; Waterkeeper Alliance, Inc.; Natural Resources Defense Council, Inc.; Center for Biological Diversity; PennEnvironment, Inc.; Chesapeake Climate Action Network; and Prairie Rivers Network and (2) Appalachian Voices; Good Stewards of Rockingham; Stokes County Branch of the NAACP; and Winyah Rivers Alliance were consolidated in the Fourth Circuit Court of Appeals on Nov. 19, 2020. *Appalachian Voices et al. v. EPA*, No. 20-2187 (4th Cir.).
- EPA filed a certified index to the record on Dec. 18, 2020.
- An industry trade group (UWAG) and certain energy companies (Electric Energy, Inc.; Coletto Creek Power, LLC; Dynegy Miami Fort, LLC; Dynegy Midwest Generation, LLC; Dynegy Zimmer, LLC; Illinois Power Generating Company; Illinois Power Resources Generating, LLC; and Kincaid Generation, LLC) moved to intervene in the litigation, which the court granted on Dec. 3, 2020. UWAG also filed a motion to transfer the litigation to the Fifth Circuit. Environmental groups opposed the motion and EPA took no position. The Court has not yet ruled on it.

Appendix B: **Pre-2020 Rule History**

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Background

- In 2015, EPA issued a final rule updating the 1982 effluent limitations guidelines and standards (ELGs) for steam electric power plants.
 - A steam electric power plant (plant) consists of one or more electric generating units (EGUs) which produce electricity primarily through the use of fossil or nuclear fuels to generate steam to turn a turbine
 - Coal-fired power plants, a subset of plants covered in the 2015 rule, generate several pollutant streams which are released into the air, water, and land
 - These coal-derived waste streams make up the majority of those regulated in the 2015 rule (see figure on next slide)
 - At the time, the 2015 rule was projected to reduce 1.4 billion lbs/year of pollutant discharges.

Background

- The 2015 rule was subject to multiple legal challenges (7 petitions for review from environmental, industry and drinking water groups) and two administrative petitions for reconsideration.
- In 2018, EPA announced it would reconsider the Steam Electric ELGs through a new rulemaking* with respect to:
 - Flue gas desulfurization (FGD) wastewater and
 - Bottom ash (BA) transport water
- The final reconsideration rule, signed on August 31, 2020, contains revised ELGs for these two waste streams.

*EPA did not reconsider limits for other wastestreams (e.g. fly ash) or new source performance standards.

Appendix C: **Further Details of the 2020 Rule Changes**

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Summary of the 2020 Rule: FGD Limits

| Pollutant or pollutant property | Year | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Change |
|---------------------------------|------|-----------------------|--|----------------|
| Arsenic, total (ug/L) | 2015 | 11 | 8 | Negligible |
| | 2020 | 18 | 8 | |
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| | 2020 | 4 | 3 | |

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Summary of the 2020 Rule: FGD Voluntary Incentive Program (VIP) Limits

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|---------------------------------|------|-----------------------|--|----------------|
| Arsenic, total (ug/L) | 2015 | 4 | N/A | Negligible |
| | 2020 | 5 | N/A | |
| Mercury, total (ng/L) | 2015 | 1.8 | 1.3 | Less Stringent |
| | 2020 | 23 | 10 | |
| Selenium, total (ug/L) | 2015 | 453 | 227 | More Stringent |
| | 2020 | 10 | N/A | |
| Nitrate/nitrite as N (mg/L) | 2020 | 2.0 | 1.2 | New Limit |
| Bromide (mg/L) | 2020 | 0.2 | N/A | New Limit |
| TDS (mg/L) | 2015 | 38 | 22 | Less Stringent |
| | 2020 | 306 | 149 | |

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Summary of the Final Rules: BA Limits

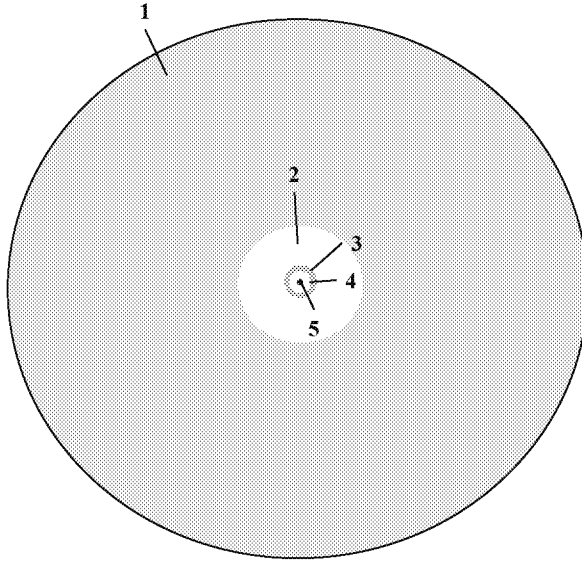
- 2015 Rule BAT/PSES:
Zero Discharge

- Compliance using dry system (does not generate BA transport water)
or
- Compliance using a wet system (must achieve 100% recycle)

- 2020 Rule BAT/PSES:
Site-Specific Purge

- May still comply using a dry system that does not generate BA transport water
or
- If compliance is using a wet system, may request a site-specific purge determination from the permitting authority

Summary of the 2020 Rule: BA Limits



- 1) **Current Discharges**: 100% of surface impoundment (SI) influent
- 2) **Rolling 30-Day Average Cap**: 10% of primary active wetted system volume (includes volumes of primary tanks, pipes, etc. but no SI volume) §423.11(aa)-(bb) and §423.13(k)(2)(i)(B) or §423.16(g)(2)(i)(B)
- 3) **Must Be Allowable Purges**: four allowable purges *See* §423.13(k)(2)(i)(A)(1)-(4) or §423.16(g)(2)(i)(A)(1)-(4)
- 4) **Must Be Necessary Purges**: “cannot be managed within the system” §423.19(c)(3)(G)
- 5) **Further Purge Treatment**: permitting authorities establish limits using Best Professional Judgement (BPJ) §423.11(cc) 23

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Summary of the 2020 Rule: Subcategories

- EPA created three new subcategories which were all given less stringent limitations
- These new subcategories were not estimated to impact a large portion of the steam electric industry (estimated counts below)

| Grouping or Subcategory | # of Plants* | # of EGUs |
|---|-----------------|------------|
| All Coal-Fired Steam Electric | 218 | 427 |
| →Subset with FGD Wastewater Discharges ¹ | 56 | 135 |
| →Subset with BA Transport Water Discharges ¹ | 94 | 214 |
| High FGD Flow Subcategory | 1 | 2 |
| Low Utilization EGUs Subcategory | 4 ² | 6 |
| Permanent Cessation of Coal Combustion EGUs Subcategory | 12 ² | 23 |

¹ Plants and EGUs with FGD and BA discharges overlap, and the 2020 rule only impacts 108 plants total

² Since the low utilization and ceasing combustion of coal subcategories impact individual EGUs, not all EGUs at a plant qualify

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Summary of the 2020 Rule: Subcategories

- High FGD Flow Plants (FGD Wastewater ONLY)
 - Plant does not have to meet selenium or nitrogen limits (technology basis is chemical precipitation, only)
 - EPA data indicate that only one plant (TVA Cumberland) qualifies for this subcategory

| Pollutant or pollutant property | Year | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Change |
|---------------------------------|------|-----------------------|--|---------------|
| Arsenic, total (ug/L) | 2015 | 11 | 8 | None |
| | 2020 | 11 | 8 | |
| Mercury, total (ng/L) | 2015 | 788 | 356 | None |
| | 2020 | 788 | 356 | |
| Selenium, total (ug/L) | 2015 | 23 | 12 | Limit Removed |
| Nitrate/nitrite as N (mg/L) | 2015 | 17.0 | 4.4 | Limit Removed |

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Summary of the 2020 Rule: Subcategories

- Low utilization EGUs (FGD Wastewater)
 - Like limitations for high FGD flow plants, the plant does not have to meet limitations for selenium and nitrogen
 - FGD systems are designed for an entire plant, so plants with both high and low utilization EGUs (if any) are likely to meet the standard limitations even for any low utilization EGUs

| Pollutant or pollutant property | Year | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Change |
|---------------------------------|------|-----------------------|--|---------------|
| Arsenic, total (ug/L) | 2015 | 11 | 8 | None |
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| Nitrate/nitrite as N (mg/L) | 2015 | 17.0 | 4.4 | Limit Removed |

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Summary of the 2020 Rule: Subcategories

- Low utilization EGUs (BA Transport Water)
 - Unlike limitations for non-subcategorized EGUs, BAT limitations for this subcategory are set equal to BPT limitations (based on surface impoundments)
 - In addition, facilities must develop and implement a best management practices (BMP) plan which maximizes wastewater recycling to the extent feasible
 - The BMP plan does not require purges to be below 10%; however, where a low utilization EGU has an existing high recycle rate system the BMP plan will effectively limit purges to the same range as the rest of the industry.

Summary of the Final Rule: Subcategories

- EGU's Permanently Ceasing Coal Combustion (FGD Wastewater)
 - Unlike the rest of the industry or subcategories, BAT limitations for this subcategory are permanently set equal to BPT and therefore do not regulate mercury, arsenic, selenium, or nitrate/nitrite
 - Three of five plants with EGU's qualifying for this subcategory and discharging FGD wastewater already operate advanced FGD wastewater treatment systems (all three operate chemical precipitation while one also operates biological treatment)

| Pollutant or pollutant property | Year | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Change |
|---------------------------------|------|-----------------------|--|---------------|
| Arsenic, total (ug/L) | 2015 | 11 | 8 | Limit Removed |
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Summary of the 2020 Rule: Subcategories

- EGUs permanently ceasing combustion of coal by 2028 (BA Transport Water)
 - Like the previous subcategory, BAT limitations for this subcategory are set equal to BPT limitations
 - Unlike the previous subcategory, no BMP plan is required for this subcategory
 - Four of nine plants with EGUs that EPA projects qualify for this subcategory and discharge BA transport water already operate high recycle rate systems

Summary of the 2020 Rule: Timing

- Compliance deadline is “as soon as possible” and “no later than” dates specified in the final rule.
 - Earliest date: October 13, 2021
 - No later than date: Wastestream/subcategory dependent (see next slide)
- Permitting authorities must consider the following site-relevant factors:^{1, 2}
 - Time necessary to expeditiously plan, design, procure, and install equipment
 - Changes being made or planned in response to other EPA air and waste regulations (e.g., CCR Part A final rule)
 - An initial commissioning period for FGD wastewater
 - Other factors as appropriate

¹ The 2020 rule does not revise the specified factors that the NPDES permitting authority must consider in determining the as soon as possible date under the 2015 rule. *See* §423.11(t).

² Applicability date for VIP limitations are not determined through application of §423.11(t) but is instead simply December 31, 2028.

Summary of the Final Rule: Timing

- For Pretreatment Standards for Existing Sources (PSES), no later than October 13, 2023.
- For direct discharges, no later than:

| Limits | FGD Wastewater | BA Transport Water |
|-------------------------------------|------------------------|---|
| Generally Applicable Limitations | December 31, 2025 | December 31, 2025 |
| High Flow Subcategory | December 31, 2023 | N/A |
| Low utilization Subcategory | December 31, 2023 | Discharge limits are immediately applicable; BMP plans must be completed by December 31, 2023 |
| Ceasing coal combustion Subcategory | Immediately Applicable | Immediately Applicable |
| VIP | December 31, 2028 | N/A |

Note: The 2015 rule “no later than” dates for all wastewaters was November 1, 2018 for indirect dischargers and December 31, 2023 for direct dischargers

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Appendix D: **FGD Wastewater Analysis**

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FGD Wastewater Analysis

Ex. 5 Deliberative Process (DP)

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FGD Wastewater Analysis: Analytical Steps

Ex. 5 Deliberative Process (DP)

Non-Salt Pollutants: these are pollutants treated by chemical precipitation plus biological treatment and include toxic/priority pollutants (mercury, arsenic, lead, etc.), nutrients (nitrogen and phosphorus), and inorganic unconventional pollutants (e.g., molybdenum).

Salt Pollutants: these are pollutants present in an ionic form that cannot be treated with chemical precipitation plus biological treatment (halogens, calcium, sodium, etc).

FGD Wastewater Analysis: Results

Ex. 5 Deliberative Process (DP)

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FGD Wastewater Analysis: Results

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FGD Wastewater Analysis: Results

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FGD Wastewater Analysis: Results

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Appendix E: Further Details on Regulatory Overlap

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Intersection with Other EPA Regulatory Actions

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6/29/21

- The purpose of this briefing is to present options for responding to litigation on the 2020 Steam Electric Reconsideration Rule (2020 rule).
- Other drivers include EO 13990 and the administration's power sector priorities.
- OW is responsible for developing legally defensible Effluent Limitations Guidelines rules (ELGs) for a range of industries and did so for coal-fired power in 2015, revising it again in the 2020 rule.
- ELGs are designed to target water pollution, however, OW has been excited to have

Ex. 5 Deliberative Process (DP)

Message

From: Scozzafava, MichaelE [Scozzafava.MichaelE@epa.gov]
Sent: 6/25/2021 1:12:08 PM
To: Best-Wong, Benita [Best-Wong.Benita@epa.gov]; Aguirre, Janita [Aguirre.Janita@epa.gov]
CC: Nagle, Deborah [Nagle.Deborah@epa.gov]; Wood, Robert [Wood.Robert@epa.gov]; Benware, Richard [Benware.Richard@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]
Subject: Final Materials for Steam Electric
Attachments: Steam Electric ELGs Administrator Briefing_20210624.pptx; Steam Electric ELG Administrator Memo 20210621 final.docx

Good Morning,

Per our conversation this morning, I removed the last bullet on the options slide and am resending the slide deck, along with the summary memo, to Janita for transmittal to the AO.

Thanks so much and have a great weekend!

Mike

Michael Scozzafava
Director (Acting)
Engineering and Analysis Division
Office of Science and Technology
Desk: (202) 566-2858
Mobile: Ex. 5 Deliberative Process (DP)

Steam Electric ELGs

6/29/2021 Briefing for Administrator Regan

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Ex. 5 Deliberative Process (DP)^e

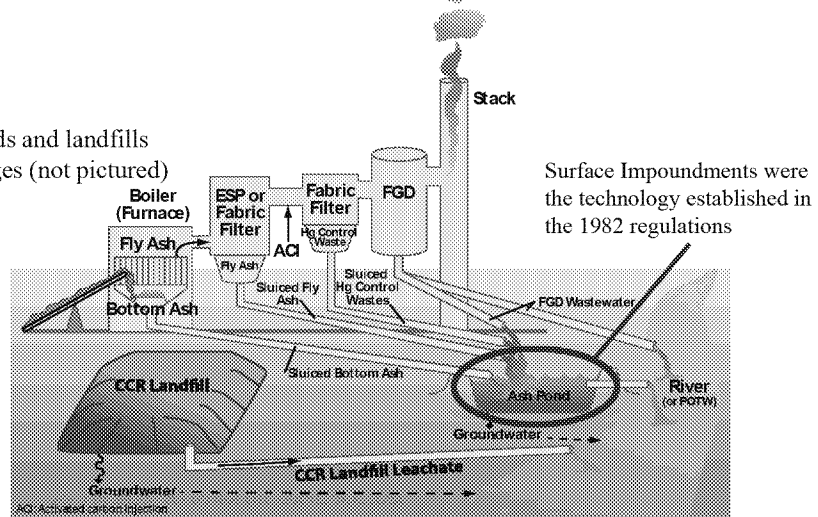
See App

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- Gasification process discharges (not pictured)



See **Appendix B** for additional history on the ELGs prior to 2020

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6/16/2022

2015 & 2020 Rule Environmental Assessment

- Wastewater discharges from power plants are adversely impacting human health and the environment. We know this from:
 - Characteristics of the pollutants they generate (e.g., toxic metals such as mercury, arsenic, selenium; nutrient loads to surface waters)
 - Documented impacts and damages
 - Modeling of wastewater discharges that corroborates the documented impacts
- Quantified environmental impacts of the 2015 and 2020 ELG include:
 - Reduces pollutant discharges by 1.4 billion pounds annually
 - Removes 99% of the mercury, 97% of the arsenic, and 98% of the selenium that would otherwise be discharged
 - Reduces water withdrawals by 57 billion gallons annually
 - Reduces health risks to fish consumers through reduced fish contamination
 - Large reductions in state water quality criteria exceedances
 - Significant improvements in aquatic species habitats and fisheries
 - Reduces eutrophication, improving the quality and value of water-based recreation and drinking water
 - Improves the quality of source water for drinking water supplies

Background: What Changed from 2015-2020

- The 2020 rule **revises the technology basis, limitations, and compliance dates** established in the 2015 rule
 - Raised some FGD wastewater limits and lowered others
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Water Pollution Reductions: FGD Wastestream

- **2020 Rule**

Ex. 5 Deliberative Process (DP)

- **Potential New Rulemaking**

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Ex. 5 Deliberative Process (DP)

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Options

Ex. 5 Deliberative Process (DP)

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Draft Rulemaking Schedule

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| Bromide (mg/L) | 2020 | 0.2 | N/A | New Limit |
| TDS (mg/L) | 2015 | 38 | 22 | Less Stringent |
| | 2020 | 306 | 149 | |

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19

Summary of the Final Rules: BA Limits

- 2015 Rule BAT/PSES:

- Zero Discharge

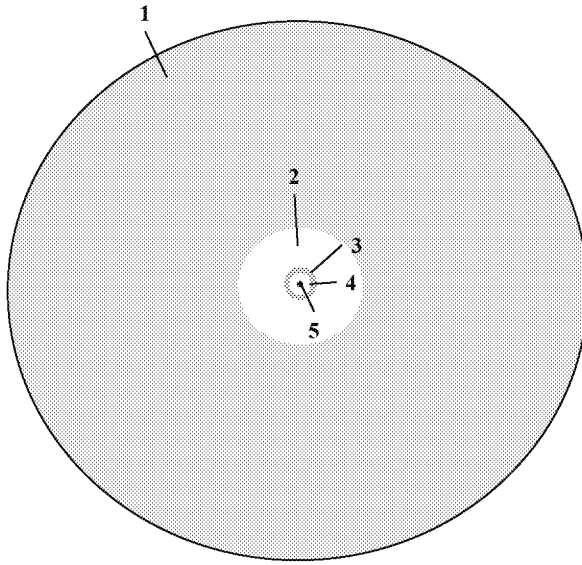
- Compliance using dry system (does not generate BA transport water)
 - or*
 - Compliance using a wet system (must achieve 100% recycle)

- 2020 Rule BAT/PSES:

- Site-Specific Purge

- May still comply using a dry system that does not generate BA transport water
 - or*
 - If compliance is using a wet system, may request a site-specific purge determination from the permitting authority

Summary of the 2020 Rule: BA Limits



- 1) **Current Discharges**: 100% of surface impoundment (SI) influent
- 2) **Rolling 30-Day Average Cap**: 10% of primary active wetted system volume (includes volumes of primary tanks, pipes, etc. but no SI volume) §423.11(aa)-(bb) and §423.13(k)(2)(i)(B) or §423.16(g)(2)(i)(B)
- 3) **Must Be Allowable Purges**: four allowable purges *See* §423.13(k)(2)(i)(A)(1)-(4) or §423.16(g)(2)(i)(A)(1)-(4)
- 4) **Must Be Necessary Purges**: “cannot be managed within the system” §423.19(c)(3)(G)
- 5) **Further Purge Treatment**: permitting authorities establish limits using Best Professional Judgement (BPJ) §423.11(cc) 23

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Summary of the 2020 Rule: Subcategories

- EPA created three new subcategories which were all given less stringent limitations
- These new subcategories were not estimated to impact a large portion of the steam electric industry (estimated counts below)

| Grouping or Subcategory | # of Plants* | # of EGUs |
|---|-----------------|------------|
| All Coal-Fired Steam Electric | 218 | 427 |
| →Subset with FGD Wastewater Discharges ¹ | 56 | 135 |
| →Subset with BA Transport Water Discharges ¹ | 94 | 214 |
| High FGD Flow Subcategory | 1 | 2 |
| Low Utilization EGUs Subcategory | 4 ² | 6 |
| Permanent Cessation of Coal Combustion EGUs Subcategory | 12 ² | 23 |

¹ Plants and EGUs with FGD and BA discharges overlap, and the 2020 rule only impacts 108 plants total

² Since the low utilization and ceasing combustion of coal subcategories impact individual EGUs, not all EGUs at a plant qualify

DRAFT DELIBERATIVE - DO NOT CITE, QUOTE, OR RELEASE

Summary of the 2020 Rule: Subcategories

- High FGD Flow Plants (FGD Wastewater ONLY)
 - Plant does not have to meet selenium or nitrogen limits (technology basis is chemical precipitation, only)
 - EPA data indicate that only one plant (TVA Cumberland) qualifies for this subcategory

| Pollutant or pollutant property | Year | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Change |
|---------------------------------|------|-----------------------|--|---------------|
| Arsenic, total (ug/L) | 2015 | 11 | 8 | None |
| | 2020 | 11 | 8 | |
| Mercury, total (ng/L) | 2015 | 788 | 356 | None |
| | 2020 | 788 | 356 | |
| Selenium, total (ug/L) | 2015 | 23 | 12 | Limit Removed |
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DRAFT DELIBERATIVE - DO NOT CITE, QUOTE, OR RELEASE

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Summary of the 2020 Rule: Subcategories

- Low utilization EGUs (FGD Wastewater)
 - Like limitations for high FGD flow plants, the plant does not have to meet limitations for selenium and nitrogen
 - FGD systems are designed for an entire plant, so plants with both high and low utilization EGUs (if any) are likely to meet the standard limitations even for any low utilization EGUs

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Summary of the 2020 Rule: Subcategories

- Low utilization EGUs (BA Transport Water)
 - Unlike limitations for non-subcategorized EGUs, BAT limitations for this subcategory are set equal to BPT limitations (based on surface impoundments)
 - In addition, facilities must develop and implement a best management practices (BMP) plan which maximizes wastewater recycling to the extent feasible
 - The BMP plan does not require purges to be below 10%; however, where a low utilization EGU has an existing high recycle rate system the BMP plan will effectively limit purges to the same range as the rest of the industry.

Summary of the Final Rule: Subcategories

- EGU's Permanently Ceasing Coal Combustion (FGD Wastewater)
 - Unlike the rest of the industry or subcategories, BAT limitations for this subcategory are permanently set equal to BPT and therefore do not regulate mercury, arsenic, selenium, or nitrate/nitrite
 - Three of five plants with EGU's qualifying for this subcategory and discharging FGD wastewater already operate advanced FGD wastewater treatment systems (all three operate chemical precipitation while one also operates biological treatment)

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Summary of the 2020 Rule: Subcategories

- EGUs permanently ceasing combustion of coal by 2028 (BA Transport Water)
 - Like the previous subcategory, BAT limitations for this subcategory are set equal to BPT limitations
 - Unlike the previous subcategory, no BMP plan is required for this subcategory
 - Four of nine plants with EGUs that EPA projects qualify for this subcategory and discharge BA transport water already operate high recycle rate systems

Summary of the 2020 Rule: Timing

- Compliance deadline is “as soon as possible” and “no later than” dates specified in the final rule.
 - Earliest date: October 13, 2021
 - No later than date: Wastestream/subcategory dependent (see next slide)
- Permitting authorities must consider the following site-relevant factors:^{1, 2}
 - Time necessary to expeditiously plan, design, procure, and install equipment
 - Changes being made or planned in response to other EPA air and waste regulations (e.g., CCR Part A final rule)
 - An initial commissioning period for FGD wastewater
 - Other factors as appropriate

¹ The 2020 rule does not revise the specified factors that the NPDES permitting authority must consider in determining the as soon as possible date under the 2015 rule. *See* §423.11(t).

² Applicability date for VIP limitations are not determined through application of §423.11(t) but is instead simply December 31, 2028.

Summary of the Final Rule: Timing

- For Pretreatment Standards for Existing Sources (PSES), no later than October 13, 2023.
- For direct discharges, no later than:

| Limits | FGD Wastewater | BA Transport Water |
|-------------------------------------|------------------------|---|
| Generally Applicable Limitations | December 31, 2025 | December 31, 2025 |
| High Flow Subcategory | December 31, 2023 | N/A |
| Low utilization Subcategory | December 31, 2023 | Discharge limits are immediately applicable; BMP plans must be completed by December 31, 2023 |
| Ceasing coal combustion Subcategory | Immediately Applicable | Immediately Applicable |
| VIP | December 31, 2028 | N/A |

Note: The 2015 rule “no later than” dates for all wastewaters was November 1, 2018 for indirect dischargers and December 31, 2023 for direct dischargers

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Appendix D: **FGD Wastewater Analysis**

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FGD Wastewater Analysis

Ex. 5 Deliberative Process (DP)

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FGD Wastewater Analysis: Analytical Steps

Ex. 5 Deliberative Process (DP)

Non-Salt Pollutants: these are pollutants treated by chemical precipitation plus biological treatment and include toxic/priority pollutants (mercury, arsenic, lead, etc.), nutrients (nitrogen and phosphorus), and inorganic unconventional pollutants (e.g., molybdenum).

Salt Pollutants: these are pollutants present in an ionic form that cannot be treated with chemical precipitation plus biological treatment (halogens, calcium, sodium, etc).

FGD Wastewater Analysis: Results

Ex. 5 Deliberative Process (DP)

FGD Wastewater Analysis: Results

Ex. 5 Deliberative Process (DP)

FGD Wastewater Analysis: Results

Ex. 5 Deliberative Process (DP)

FGD Wastewater Analysis: Results

Ex. 5 Deliberative Process (DP)



Ex. 5 Deliberative Process (DP)

BRIEFING MEMO

June 29, 2021

MEMORANDUM FOR THE ADMINISTRATOR

FROM: Radhika Fox, OW, 202-XXX-XXXX, [[HYPERLINK "mailto:Fox.Radhika@epa.gov"](mailto:Fox.Radhika@epa.gov)]

SUBJECT: Steam Electric Reconsideration Option Selection

DATE: Tuesday June 29, 2021

TIME: 9:30 – 10:30 AM EST

I. REQUESTING OFFICE

Office of Water, Office of Science and Technology

II. TIMING

This briefing is driven by: Executive Order 13990 directing EPA to reconsider the rule, ongoing litigation currently held in abeyance until July 26, 2021

Ex. 5 Deliberative Process (DP)

III. PURPOSE

To receive feedback on options for implementing or revising the 2020 Steam Electric Effluent Limit Guideline (2020 rule).

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

[PAGE] of [NUMPAGES]

Printed on 06/09/2021

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IV. **BACKGROUND AND HISTORY (BULLETS ARE FINE)**

- In 2015 EPA finalized revision to the Steam Electric Effluent Guidelines, the first update to this rule since 1982.
 - On September 18, 2017 EPA announced it was delaying implementation of the 2015 rule and initiating a new rulemaking.
- In 2020 EPA finalized revisions to the 2015 rule.
- Differences between the 2015 rule and the 2020 rule include:
 - Changes to limits and compliance dates for Flue Gas Desulfurization (FGD) wastewater
 - Relaxed numeric limits for selenium
 - Tightened limits for nitrogen and mercury
 - Compliance date extended from 2023 to 2025
 - Changes to limits and compliance dates for FGD wastewater voluntary incentives program
 - Relaxed limits for mercury and TDS
 - Tightened limits for selenium
 - Created new limits for bromide and nitrogen
 - Compliance date extended from 2023 to 2028
 - Changes to limits and compliance dates for bottom ash transport water
 - Relaxed zero discharge limit to a case-by-case volumetric purge not to exceed 10 percent of system volume
 - Compliance date extended from 2023 to 2025
 - Created new subcategories
 - High-FGD flow plants
 - Low-utilization electric generating units (peakers)
 - Electric generating units ceasing coal combustion by 2028
- After promulgation of the 2020 rule EPA is evaluating whether revision to the existing regulation is necessary for three reasons:
 - Executive Order 13990 (the 2020 Steam Electric ELGs are listed as a rule for EPA to consider revising)



Briefing Memo – Power Plant Strategy

- Litigation on 2020 Rule has been consolidated in *Appalachian Voices et al. v. EPA*, No. 20-2187 (4th Cir.)
 - Petitions for review of the 2020 rule were filed by multiple environmental groups
 - Electric utilities and trade associations have intervened to defend the 2020 rule
 - The litigation is currently being held in abeyance until July 26
 - EPA is expected to make a decision to revise or not revise the 2020 Steam Electric ELGs ELG by this time

Ex. 5 Deliberative Process (DP)

V. KEY ISSUES

Ex. 5 Deliberative Process (DP)

VI. REGULATORY SUMMARY (IF APPROPRIATE)

Ex. 5 Deliberative Process (DP)

[PAGE] of [NUMPAGES]



Ex. 5 Deliberative Process (DP)

VII. ADDITIONAL POLICY OR TECHNICAL INFORMATION (IF APPROPRIATE)

The attached power point provides additional information.

VIII. ANTICIPATED STAKEHOLDER REACTION

Ex. 5 Deliberative Process (DP)



IX. STAKEHOLDER INVOLVEMENT

OW has had preliminary engagement with a wide range of stakeholders including: environmental petitioners, academic researchers, biological treatment and membrane filtration vendors, electric utilities, and trade associations.

X. ROLL-OUT AND COMMUNICATIONS PLAN

Upon selection of an option EPA and DOJ would respond to the courts regarding the ongoing litigation, and EPA would also have a formal rollout that would include involvement from the Office of the Administrator and from OW. The substance of the legal response and rollout activities would be dependent on the option selected

XI. NEXT STEPS/UPCOMING DEADLINES

We are seeking feedback on how to proceed with the implementation and potential revisions of the 2020 Rule. EPA and DOJ must respond to the courts by July 26, 2020 on EPA's intent to revise the 2020 rule.

Message

From: Risley, David [Risley.David@epa.gov]
Sent: 7/21/2021 6:06:06 PM
To: Fox, Radhika [Fox.Radhika@epa.gov]; Aguirre, Janita [Aguirre.Janita@epa.gov]
Subject: Steam Electric comms
Attachments: 7.21.2021 - Steam Electric Comms Plan.docx

Here you go!

David Risley
Office of Water Communications, Director
Risley.David@epa.gov
Office: 202-343-9177
Cell: Ex. 6 Personal Privacy (PP)

Appointment

From: Owscheduling [Owscheduling@epa.gov]
Sent: 7/30/2021 1:26:09 PM
To: Owscheduling [Owscheduling@epa.gov]; Nagle, Deborah [Nagle.Deborah@epa.gov]; Wood, Robert [Wood.Robert@epa.gov]; Scozzafava, MichaelE [Scozzafava.MichaelE@epa.gov]; Huff, Lisa [Huff.Lisa@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; Benware, Richard [Benware.Richard@epa.gov]; Covington, James [Covington.James@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Zomer, Jessica [Zomer.Jessica@epa.gov]; Fox, Radhika [Fox.Radhika@epa.gov]; Best-Wong, Benita [Best-Wong.Benita@epa.gov]; Cisar, Elizabeth [Cisar.Elizabeth@epa.gov]; Hewitt, Julie [Hewitt.Julie@epa.gov]; Hessenauer, Meghan [Hessenauer.Meghan@epa.gov]; Tripp, Anthony [Tripp.Anthony@epa.gov]; Monsarrat, Julia [Monsarrat.Julia@epa.gov]
CC: Weyer, Erica [weyer.eric@epa.gov]; Skane, Elizabeth [Skane.Elizabeth@epa.gov]; Sabater, Juan [Sabater.Juan@epa.gov]; Aguirre, Janita [Aguirre.Janita@epa.gov]; Trombley, Michael [Trombley.Michael@epa.gov]; Akopian, Natalia [akopian.natalia@epa.gov]; Penman, Crystal [Penman.Crystal@epa.gov]
Subject: Steam Electric ELG Early Guidance
Attachments: Request 207 - Steam Electric ELG Early Guidance.pdf; Steam Electric ELG Early Guidance 20210813.pptx
Location: Microsoft Teams Meeting

Start: 8/16/2021 5:00:00 PM
End: 8/16/2021 5:45:00 PM
Show Time As: Tentative

Required Attendees: Nagle, Deborah; Wood, Robert; Scozzafava, MichaelE; Huff, Lisa; Damico, Brian; Benware, Richard; Covington, James; Levine, MaryEllen; Neugeboren, Steven; Hoffer, Melissa; Zomer, Jessica; Fox, Radhika; Best-Wong, Benita; Cisar, Elizabeth; Hewitt, Julie; Hessenauer, Meghan; Tripp, Anthony; Monsarrat, Julia
Optional Attendees: Weyer, Erica; Skane, Elizabeth; Sabater, Juan; Aguirre, Janita; Trombley, Michael; Akopian, Natalia; Penman, Crystal

Microsoft Teams meeting

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Or call in (audio only)

Ex. 6 Personal Privacy (PP) United States, Washington DC

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2020 Steam Electric Reconsideration Rule

Transition Briefing for Radhika Fox

February 9, 2021

Internal/Deliberative

1

Acronyms Used in This Briefing

- **BA** (bottom ash)
- **BAT** (best available technology economically achievable)
- **BMP** (best management practices)
- **BPT** (best practical control technology)
- **CCR** (coal combustion residual)
- **DOE** (Department of Energy)
- **EGU** (electric generating unit)
- **ELG** (effluent limitations guideline)
- **FGD** (flue gas desulfurization)
- **PSES** (pretreatment standards for existing sources)
- **TVA** (Tennessee Valley Authority)
- **VIP** (voluntary incentives program)

Overview

- Purpose
- History and Background
- Summary of What Changed
 - Flue gas desulfurization (FGD) wastewater
 - Bottom ash (BA) transport water
 - New subcategories
 - Implementation timing
- Questions to Ponder
- Litigation on the 2020 Rule
- Decisions Needed Today and Next Steps on Additional Briefings

Purpose

- The purpose of this briefing is to:
 - Provide history and background on the Steam Electric Effluent Limitations Guidelines (ELGs);
 - Tee up issues and considerations for future decision-making; and
 - Obtain approval to seek an abeyance in current litigation

History and Background

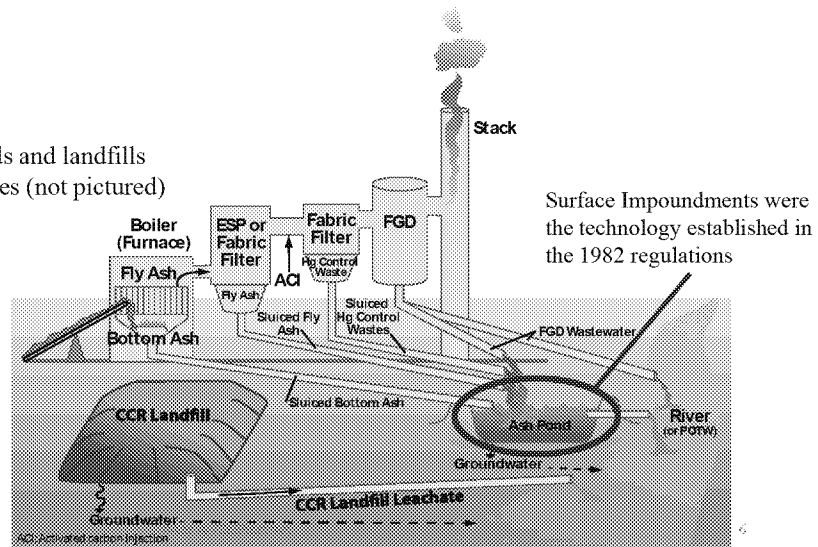
- In 2015, EPA issued a final rule updating the 1982 effluent limitations guidelines and standards (ELGs) for steam electric power plants.
 - A steam electric power plant (plant) consists of one or more electric generating units (EGUs) which produce electricity primarily through the use of fossil or nuclear fuels to generate steam to turn a turbine
 - Coal-fired power plants, a subset of plants covered in the 2015 rule, generate several pollutant streams which are released into the air, water, and land
 - These coal-derived waste streams make up the majority of those regulated in the 2015 rule (see figure on next slide)

History and Background

- FGD wastewater
- Fly ash transport water
- BA transport water
- Mercury (Hg) control waste
- Leachate from ash/FGD ponds and landfills
- Gasification process discharges (not pictured)

Notes:

- Also addressed legacy wastewaters (any of the above wastewaters generated before the implementation dates for the new, more stringent BAT)
- Companion coal combustion residual (CCR) rule regulates solid waste disposal



6/16/2022

History and Background

- The 2015 rule was subject to multiple legal challenges (7 petitions for review from environmental, industry and drinking water groups) and two administrative petitions for reconsideration.
- In 2018, EPA announced it would reconsider the Steam Electric ELGs through a new rulemaking* with respect to:
 - Flue gas desulfurization (FGD) wastewater and
 - Bottom ash (BA) transport water
- The final reconsideration rule, signed on August 31, 2020, contains revised ELGs for these two waste streams.

*EPA did not reconsider limits for fly ash transport water or certain other wastestreams.

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Summary of the 2020 Rule: What Changed?

- Revises the technology basis, limitations, and compliance dates for
 - FGD wastewater (both generally applicable limitations and the more stringent voluntary incentives program [VIP¹] limitations); and
 - BA transport water.
- Creates new subcategories (point source discharges subject to differentiated treatment) with less stringent limitations and compliance dates for
 - High FGD flow power plants,
 - Low-utilization electric generating units (i.e., “peakers”), and
 - Electric generating units permanently ceasing coal combustion by 2028 (i.e., retiring or converting to a non-coal fuel)

¹ The VIP allows facilities additional time in exchange for meeting more stringent limitations through the adoption of more advanced treatment technologies Internal/Deliberative

Summary of the 2020 Rule: FGD Limits

| Pollutant or pollutant property | Year | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Change |
|---------------------------------|------|-----------------------|--|----------------|
| Arsenic, total (ug/L) | 2015 | 11 | 8 | Negligible |
| | 2020 | 18 | 8 | |
| Mercury, total (ng/L) | 2015 | 788 | 356 | More Stringent |
| | 2020 | 103 | 34 | |
| Selenium, total (ug/L) | 2015 | 23 | 12 | Less Stringent |
| | 2020 | 70 | 29 | |
| Nitrate/nitrite as N (mg/L) | 2015 | 17.0 | 4.4 | More Stringent |
| | 2020 | 4 | 3 | |

Summary of the 2020 Rule: FGD Voluntary Incentive Program (VIP) Limits

| Pollutant or pollutant property | Year | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Change |
|---------------------------------|------|-----------------------|--|----------------|
| Arsenic, total (ug/L) | 2015 | 4 | N/A | Negligible |
| | 2020 | 5 | N/A | |
| Mercury, total (ng/L) | 2015 | 1.8 | 1.3 | Less Stringent |
| | 2020 | 23 | 10 | |
| Selenium, total (ug/L) | 2015 | 453 | 227 | More Stringent |
| | 2020 | 10 | N/A | |
| Nitrate/nitrite as N (mg/L) | 2020 | 2.0 | 1.2 | New Limit |
| Bromide (mg/L) | 2020 | 0.2 | N/A | New Limit |
| TDS (mg/L) | 2015 | 38 | 22 | Less Stringent |
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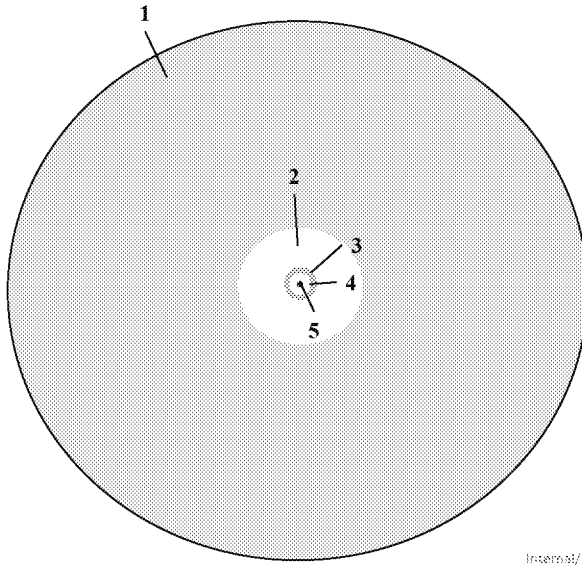
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 - Other factors as appropriate

¹ The 2020 rule does not revise the specified factors that the NPDES permitting authority must consider in determining the as soon as possible date under the 2015 rule. *See* §423.11(t).

² Applicability date for VIP limitations are not determined through application of §423.11(t) but is instead simply December 31, 2028.

Summary of the Final Rule: Timing

- For Pretreatment Standards for Existing Sources (PSES), no later than October 13, 2023.
- For direct discharges, no later than:

| Limits | FGD Wastewater | BA Transport Water |
|-------------------------------------|------------------------|---|
| Generally Applicable Limitations | December 31, 2025 | December 31, 2025 |
| High Flow Subcategory | December 31, 2023 | N/A |
| Low utilization Subcategory | December 31, 2023 | Discharge limits are immediately applicable; BMP plans must be completed by December 31, 2023 |
| Ceasing coal combustion Subcategory | Immediately Applicable | Immediately Applicable |
| VIP | December 31, 2028 | N/A |

Note: The 2015 rule “no later than” dates for all wastewaters was November 1, 2018 for indirect dischargers and December 31, 2023 for direct dischargers

Internal/Deliberative

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Other Questions to Ponder...

Ex. 5 Deliberative Process (DP)

Other Questions to Ponder (cont'd)...

Ex. 5 Deliberative Process (DP)

Other Questions to Ponder (cont'd)...

Ex. 5 Deliberative Process (DP)

Litigation on the 2020 Rule

- 2 petitions for review filed by Appalachian Voices, Clean Water Action et al. were consolidated in the 4th Cir. Ct. of Appeals. *Appalachian Voices v. EPA*, No. 20-2187.
- Case stayed until Feb. 24, 2021, which is the deadline for filing petitions for review.
- We can expect petitioners to raise some of the following issues in the litigation, which were the focus of their public comments:

Ex. 5 Deliberative Process (DP)

Decisions Needed and Next Steps

- **Decision Needed Today:** Approval to seek an abeyance in the Fourth Circuit before February 24
 - Lay of the land for current litigation (OGC)

Ex. 5 Deliberative Process (DP)

- **Future Decision:** Substantive decision on potential reconsideration
- **Next Steps:**

Ex. 5 Deliberative Process (DP)

Appendix Contents

- Illustrative timeline of 2020 rule implementation (slide 27)
- Regulatory options considered in the 2015 final rulemaking (slide 28) and in the 2020 final rulemaking (slide 29)
- Table of EGUs retiring or repowering between January 1, 2024 and December 31, 2028 (slides 30-31)

Preliminary Decisions, Some May Change

Final Decisions, Implementation Underway

Ongoing:
Company reads the final regulation, conducts scoping analysis and regular integrated resource plan analyses, pilot tests equipment, begins raising capital, seeks bids, may transfer under §423.13(o)

10/13/2021:
If a company believes it will participate in a subcategory or VIP, the company files a Notice of Planned Participation (NOPP)* with its permitting authority or control authority

12/31/2023:
High FGD flow plants and LUEGUs must meet applicable requirements; no further transfer into LUEGU subcategory under §423.13(o)

12/31/2025:
Implementation of generally applicable requirements; no further transfer between limitations is permitted under §423.13(o)

12/31/2028:
Implementation of VIP limits; final date to retire/repower

***Ongoing for those filing a NOPP:**

- (1) File annual progress reports/certifications with the permitting authority or control authority.
- (2) File a notice of material delay, if necessary. §423.19(j)

2015 Rule Regulatory Options

| Wastestreams | Technology Basis for the BAT Regulatory Options | | | | | |
|------------------------------------|---|---|--|---|---|--------------------------|
| | A | B | C | D | E | F |
| FGD Wastewater | Chemical Precipitation | Chemical Precipitation + Biological Treatment | Chemical Precipitation + Biological Treatment | Chemical Precipitation + Biological Treatment | Chemical Precipitation + Biological Treatment | Evaporation |
| Fly Ash Transport Water | Dry Handling | Dry Handling | Dry handling | Dry handling | Dry handling | Dry handling |
| Bottom Ash Transport Water | Impoundment (Equal to BPT) | Impoundment (Equal to BPT) | Dry handling/Closed loop (for units >400 MW); Impoundment (Equal to BPT) (for units ≤400 MW) | Dry handling/Closed loop | Dry handling/Closed loop | Dry handling/Closed loop |
| FGMC Wastewater | Dry handling | Dry handling | Dry handling | Dry handling | Dry handling | Dry handling |
| Gasification Wastewater | Evaporation | Evaporation | Evaporation | Evaporation | Evaporation | Evaporation |
| Combustion Residual Leachate | Impoundment (Equal to BPT) | Impoundment (Equal to BPT) | Impoundment (Equal to BPT) | Impoundment (Equal to BPT) | Chemical Precipitation | Chemical Precipitation |
| Non-Chemical Metal Cleaning Wastes | [Reserved] | [Reserved] | [Reserved] | [Reserved] | [Reserved] | [Reserved] |

- Option D was selected as the basis for the BAT effluent limitations.
- For all units 50MW and smaller (and for oil-fired units of any size), BAT limits for all wastestreams are set equal to the 1982 BPT regulation, based on settling ponds.
- For legacy wastes, BAT limits for all wastestreams are set equal to the 1982 BPT regulation, based on settling ponds.
- Created a voluntary incentives program (VIP) for FGD wastewater based on evaporation.

Table ES-1: Regulatory Options

| Wastestream | Subcategory | Technology Basis for BAT/PSES Regulatory Options [Compliance Timing] ^b | | | | |
|----------------------------|--|---|---------------------------------------|--|--|---------------------------------------|
| | | 2015 Rule (Baseline) | Option D ^c | Option A | Option B | Option C |
| FGD Wastewater | NA (default) ^a | Chemical Precipitation + HRTR Biological Treatment [2021-2023] | Chemical Precipitation [2021-2023] | Chemical Precipitation + LRTR Biological Treatment [2021-2025] | Chemical Precipitation + LRTR Biological Treatment [2021-2025] | Membrane Filtration [2024-2028] |
| | High FGD Flow Facilities: Plant-level scrubber purge flow >4 MGD | NS | NS | Chemical Precipitation [2021-2023] | NS | NS |
| | Low Utilization Boilers: All units have 24-month average utilization < 10% | NS | NS | Chemical Precipitation [2021-2023] | NS | NS |
| | Generating units ceasing combustion of coal by December 31, 2028 | NS | NS ^d | Surface Impoundment | NS | NS |
| | FGD Wastewater Voluntary Incentives Program (Direct Dischargers Only) | Chemical Precipitation + Evaporation [2023] | Membrane Filtration [2024] | Membrane Filtration [2025] | Membrane Filtration [2028] | NA |
| Bottom Ash Transport Water | NA (default) ^a | Dry Handling / Closed loop [2021-2023] | High Recycle Rate Systems [2021-2023] | High Recycle Rate Systems [2021-2025] | High Recycle Rate Systems [2021-2025] | High Recycle Rate Systems [2021-2025] |
| | Low Utilization Boilers: All units have 24-month average utilization < 10% | NS | NS | Surface Impoundment + BMP Plan [2021-2023] | NS | NS |
| | Generating units ceasing combustion of coal by December 31, 2028 | NS | NS ^d | Surface Impoundment | NS | NS |

Abbreviations: BMP = Best Management Practice; HRTR = High Hydraulic Residence Time; LRTR = Low Hydraulic Residence Time; NS = Not subcategorized; NA = Not applicable

a. The table above does not present existing subcategories included in the 2015 rule as EPA did not reopen the existing subcategorization of oil-fired units or units with a nameplate capacity of 50 MWh or less.

b. The compliance timing is 2021-2023 for indirect dischargers across all options.

c. Option D corresponds to proposed Option 1.

d. Option 1 as proposed used surface impoundment as the technology basis for electric generating units ceasing combustion of coal by December 31, 2028. In its 2019 analysis, however, EPA did not specifically subcategorize these boilers but instead omitted these boilers from the analysis (see U.S. EPA, 2019a).

Table 1 – Costs for EGU's (Absent Subcategorization) with Announced Dates for Retiring or Converting Fuels of 2024-2028

| Count | Power plant | Unit | Retire/ Repower Date | Capital Costs | O&M Costs | Annualized Over Years Remaining | 20-yr \$/MWh | Adjusted \$/MWh |
|-------|---|-----------|----------------------------|------------------|--------------|---------------------------------------|-----------------|--------------------|
| 1 | Rockport | SE Unit-1 | 2028 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 2 | Allen Steam Station | SE Unit-4 | 2028 | \$248,857 | \$17,354 | \$39,031 | \$0.26 | \$0.28 |
| 3 | Allen Steam Station | SE Unit-5 | 2028 | \$248,867 | \$18,593 | \$60,271 | \$0.12 | \$0.18 |
| 4 | Allen & Kang Generating Plant | SE Unit-1 | 2028 | \$20,697,956 | \$2,175,463 | \$5,557,971 | \$1.45 | \$1.95 |
| 5 | PPL Brunner Island | SE Unit-1 | 2028 | \$14,178,286 | \$1,304,569 | \$3,729,215 | \$4.73 | \$8.61 |
| 6 | PPL Brunner Island | SE Unit-2 | 2028 | \$16,353,489 | \$1,315,087 | \$4,053,769 | \$4.05 | \$5.74 |
| 7 | PPL Brunner Island | SE Unit-3 | 2028 | \$28,483,891 | \$1,813,653 | \$6,384,119 | \$3.64 | \$4.44 |
| 8 | NIPSCO Michigan City Generating Station | SE Unit-1 | 2028 | \$1,045,342 | \$0 | \$175,044 | \$0.08 | \$0.11 |
| 9 | Jim Bridger Power Plant | SE Unit-2 | 2028 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 10 | McMicken Station | SE Unit-1 | 2028 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 11 | McMicken Station | SE Unit-2 | 2028 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 12 | Colstrip | SE Unit-3 | 2027 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 13 | Colstrip | SE Unit-4 | 2027 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 14 | White Bluff Plant | SE Unit-1 | 2027 | \$26,522 | \$33 | \$4,954 | \$0.00 | \$0.00 |
| 15 | White Bluff Plant | SE Unit-2 | 2027 | \$26,522 | \$35 | \$4,956 | \$0.00 | \$0.00 |
| 16 | Dave Johnston Plant | SE Unit-1 | 2027 | \$6,690,598 | \$1,682,956 | \$2,324,418 | \$2.78 | \$3.75 |
| 17 | Dave Johnston Plant | SE Unit-2 | 2027 | \$6,690,598 | \$1,694,861 | \$2,336,123 | \$2.46 | \$3.33 |
| 18 | Dave Johnston Plant | SE Unit-3 | 2027 | \$5,997,504 | \$1,395,806 | \$3,250,838 | \$1.70 | \$2.37 |
| 19 | Dave Johnston Plant | SE Unit-4 | 2027 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 20 | Intermountain Power Project | SE Unit-1 | 2027 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 21 | Intermountain Power Project | SE Unit-2 | 2027 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 22 | Winyah Generating Station | SE Unit-1 | 2027 | \$12,574,491 | \$619,461 | \$2,943,695 | \$3.71 | \$4.95 |
| 23 | Winyah Generating Station | SE Unit-2 | 2027 | \$14,146,474 | \$690,087 | \$3,315,011 | \$6.24 | \$10.21 |
| 24 | Craig Station | SE Unit-2 | 2026 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 25 | Northeastern Power Station | SE Unit-3 | 2026 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 26 | Dolet Hills Power Station | SE Unit-1 | 2026 | \$23,407,563 | \$2,723,514 | \$7,634,280 | \$2.85 | \$4.41 |
| 27 | Interstate Power and Light - Prairie Creek Generating Station | SE Unit-1 | 2025 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 28 | Interstate Power and Light - Prairie Creek Generating Station | SE Unit-2 | 2025 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 29 | Interstate Power and Light - Prairie Creek Generating Station | SE Unit-3 | 2025 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 30 | Big Cajun 2 | SE Unit-1 | 2025 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 31 | Sherburne County Generating Plant | SE Unit-1 | 2025 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |

| Count | Power plant | Unit | Retire/ Repower Date | Capital Costs | O&M Costs | Annualized Over Years Remaining | 20-yr \$/MWh | Adjusted \$/MWh |
|-------|-------------------------------------|-----------|----------------------------|------------------|--------------|---------------------------------------|-----------------|--------------------|
| 32 | TransAlta Centralia Generation, LLC | SE Unit-2 | 2025 | \$12,191,588 | \$536,223 | \$3,509,638 | \$0.57 | \$1.18 |
| 33 | Cholla Power Plant | SE Unit-1 | 2025 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 34 | Cholla Power Plant | SE Unit-3 | 2025 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 35 | North Valley Generating Station | SE Unit-2 | 2025 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 36 | Naughton Power Plant | SE Unit-1 | 2025 | \$7,985,008 | \$1,663,947 | \$3,611,416 | \$2.97 | \$3.10 |
| 37 | Naughton Power Plant | SE Unit-2 | 2025 | \$9,428,931 | \$1,792,440 | \$4,095,044 | \$1.73 | \$2.64 |
| 38 | Comanche Station | SE Unit-2 | 2025 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 39 | Erickson Station | SE Unit-1 | 2025 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 40 | Allen Steam Station | SE Unit-1 | 2024 | \$149,320 | \$11,156 | \$55,239 | \$0.51 | \$0.68 |
| 41 | Allen Steam Station | SE Unit-2 | 2024 | \$149,320 | \$11,156 | \$55,239 | \$0.50 | \$0.65 |
| 42 | Allen Steam Station | SE Unit-3 | 2024 | \$248,867 | \$17,354 | \$90,826 | \$0.22 | \$0.48 |
| 43 | C D McIntosh Jr. Power Plant | SE Unit-3 | 2024 | \$5,694,697 | \$349,820 | \$2,031,055 | \$0.59 | \$1.34 |
| 44 | JT Deely Steam Electric Station | SE Unit-1 | 2024 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 45 | JT Deely Steam Electric Station | SE Unit-2 | 2024 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 46 | Will County Station | SE Unit-4 | 2024 | \$16,938,308 | \$1,902,190 | \$7,493,311 | \$5.16 | \$10.47 |

Internal/Deliberation

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Appointment

From: Fox, Radhika [Fox.Radhika@epa.gov]
Sent: 3/4/2021 7:33:04 PM
To: Fox, Radhika [Fox.Radhika@epa.gov]; Best-Wong, Benita [Best-Wong.Benita@epa.gov]; Nagle, Deborah [Nagle.Deborah@epa.gov]; Wood, Robert [Wood.Robert@epa.gov]; Scozzafava, MichaelE [Scozzafava.MichaelE@epa.gov]; Huff, Lisa [Huff.Lisa@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; Pritts, Jesse [Pritts.Jesse@epa.gov]; Benware, Richard [Benware.Richard@epa.gov]; Flanders, Phillip [Flanders.Phillip@epa.gov]; Lewis, Samantha [Lewis.Samantha@epa.gov]; Siddiqui, Ahmar [Siddiqui.Ahmar@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]; Zomer, Jessica [Zomer.Jessica@epa.gov]; Corona, Joel [Corona.Joel@epa.gov]; Whitlock, Steve [Whitlock.Steve@epa.gov]
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Subject: Steam Electric - ELG
Attachments: Steam Transition Briefing_20210208.pptx; ELG Baseball Cards 20210305_final.pptx; Steam Electric AAA briefing 2021-03-10.docx
Location: Microsoft Teams Meeting
Start: 3/10/2021 4:00:00 PM
End: 3/10/2021 4:45:00 PM
Show Time As: Busy

Required Attendees: Benita Best-Wong; Nagle, Deborah; Wood, Robert (Wood.Robert@epa.gov); Scozzafava.MichaelE@epa.gov; Huff, Lisa; Damico, Brian; Pritts, Jesse; Benware, Richard; Flanders, Phillip; Lewis, Samantha; Siddiqui, Ahmar; Hoffer, Melissa; Neugeboren, Steven; Levine, MaryEllen; Zomer, Jessica; Corona, Joel; Whitlock, Steve
Optional Attendees: Tiago, Joseph; Laija, Emerald; Weyer, Erica; Sabater, Juan

Purpose of the meeting: Provide an overview of the Effluent Limit Guidelines (ELG) Program and other potential opportunities for ELG rulemakings to inform decisions regarding the Steam Electric Reconsideration Rule (2020) and discuss options for next steps.

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| Steam Electric Power Generating Effluent Guideline | | |
|---|--|--|
| Background: In 2015 EPA finalized regulations to limit discharges from coal-fired power plants, primarily for the purpose of reducing toxics and dissolved metal discharges. In 2020 we revised these rules. Ex. 5 Deliberative Process (DP) | | |
| Ex. 5 Deliberative Process (DP) | | |
| Primary Pollutants Toxics, Dissolved metals, and nutrients. | Existing Regulatory Requirements: Numeric limits on these pollutants set in 2015 and upheld in 2020. | Potential Additional Primary Pollutant Reductions: Ex. 5 Deliberative Process (DP) |
| Regulatory History: Coal-fired power plants are currently regulated under the Steam Electric ELG in 40 CFR Part 423, however limitations for leachate and legacy wastewater have been vacated and remanded by the courts. Additionally, Flue Gas Desulfurization wastewater and Bottom ash transport water limitations were modified in 2020 and are subject to ongoing litigation in the Fourth Circuit Court of Appeals. | | |
| Current pollutant concentrations: Wastestream specific, as required by existing regulations. | Total Facilities Likely Regulated: <100 | Ex. 5 Deliberative Process (DP) |
| <div>Notes:</div> <div><ul style="list-style-type: none"></div> <div>Ex. 5 Deliberative Process (DP)</div> | | |

| Effluent Guideline for PFAS Producers | | |
|---|--|---|
| Background: There are currently no national discharge limits for PFAS discharges from facilities engaged in the production of PFAS and PFAS-based compounds. | | |
| <div>Ex. 5 Deliberative Process (DP)</div> | | |
| Primary Pollutants PFAS (e.g. PFOA, PFOS, GenX, PFBS, fluorotelomers, etc) | Existing Regulatory Requirements: Only site-specific limits as deemed appropriate by permit writers. | Potential Additional Primary Pollutant Reductions: <div>Ex. 5 Deliberative Process (DP)</div> |
| Regulatory History: Chemical manufacturers are currently regulated under the Organic Chemicals, Plastics and Synthetic Fibers Manufacturers ELG in 40 CFR Part 414, however this ELG does not include any numeric limits for PFAS. Additionally, PFAS formulators, who process PFAS feedstock into other commercial products, are likely not covered by this regulation. | | |
| Current pollutant concentrations: Non-detect – 400 PPB | Total Facilities Likely Regulated: <100 | Available Technologies: <div>Ex. 5 Deliberative Process (DP)</div> |
| Notes: <ul style="list-style-type: none"> EPA will soon publish an advance notice of proposed rulemaking requesting data from PFAS producers. <ul style="list-style-type: none"> This notice solicits data that could be used to support a potential rulemaking. | | |
| <div>Ex. 5 Deliberative Process (DP)</div> | | |

| Revised Effluent Guideline for Metal Finishers | | |
|---|---|--|
| Background: Metal finishers are currently regulated under 40 CFR Part 433. EPA estimates that | | |
| Ex. 5 Deliberative Process (DP) | | |
| There are no limits in the existing regulation for PFAS compounds and these facilities are discharging PFAS. | | |
| Primary Pollutants PFAS (e.g., 6:2 Fluorotelomer Sulfate, PFOS, etc) | Existing Regulatory Requirements: Only local limits for PFAS as deemed appropriate by permit writers. | Potential Additional Primary Pollutant Reductions: Ex. 5 Deliberative Process (DP) |
| Regulatory History: The metal finishing ELG was initially developed in 1983 and underwent minor technical revisions in 1984 and 1986. EPA completed a review of the metal finishing industry in 2018 that did not include review of PFAS discharges. Through the PFAS Multi-Industry Study, EPA identified a large number of metal finishing facilities with unregulated PFAS discharges. | | |
| Current pollutant concentrations: Non-detect – 540 PPB | Total Facilities Likely Regulated: >1,000 | Ex. 5 Deliberative Process (DP) |
| Notes: <ul style="list-style-type: none"> This industry has 1,000+ facilities that conduct chromium electroplating activities, many of which use PFAS for fume suppressant. At one time the industry used PFOS-based fume suppressant and has transitioned to an alternative PFAS compound, 6:2 FTS. Many facilities are still detecting and discharging PFOS after discontinuing use. Unclear if this is due to legacy contamination or degradation compounds. | | |

| | | |
|--|---|--|
| Effluent Guideline for Meat and Poultry Processors | | |
| Background: EAD is conducting a detailed study of nutrient discharges from the Meat and Poultry Products (MPP) industry. | | |
| Ex. 5 Deliberative Process (DP) | | |
| Primary Pollutants Nitrogen, phosphorus, ammonia, biochemical oxygen demand (BOD) | Existing Regulatory Requirements: Effluent limits for direct dischargers. No limits for indirect dischargers. | Potential Pollutant Reductions: Ex. 5 Deliberative Process (DP) |
| Regulatory History: Meat and poultry processing facilities are currently regulated at 40 CFR Part 432. The existing ELGs only regulate direct discharging facilities, and there are no limitations for phosphorus. | | |
| Ex. 5 Deliberative Process (DP) | | |
| Current pollutant concentrations (annual averages): Nitrogen: 37 mg/L TN Phosphorus: 8 mg/l TP Ammonia: 7 mg/L | Total Facilities Potentially Regulated: 300 direct dischargers ~5,700 indirect dischargers | Ex. 5 Deliberative Process (DP) |
| Notes: | Ex. 5 Deliberative Process (DP) | |
| Ex. 5 Deliberative Process (DP) | | |

Internal Deliberative



STEAM ELECTRIC RECONSIDERATION RULE**Issue:**

The purpose of this briefing is to provide context for your decision on the 2020 Steam Electric Reconsideration Rule, this briefing delivers an overview of the Effluent Limitations Guidelines (ELG) development process, discusses opportunities for ELG rulemakings to begin this year, and introduces potential options for revising the 2020 rule. **A decision is not needed today.**

Ex. 5 Deliberative Process (DP)

Background:

- The Clean Water Act directs EPA to annually review industrial sources of pollution to determine if new ELGs or revisions to existing ELGs are appropriate.
- ELGs set technology-based numeric limits that apply to pollutant discharges from industrial sources. These limits may apply to both:
 - direct discharges to surface waters, and
 - indirect discharges to publicly owned treatment works (POTWs).
- ELGs are designed to be the baseline level of treatment for an entire industrial category irrespective of site-specific water quality or human health concerns.
- ELGs are based on the performance of the best available technology and then EPA derives limitations based on that technology. Once limits are set, dischargers can use any technology to meet the limits.
- The technology selected as the basis for the numeric limits and the numeric limits based on that technology have to be evaluated and determined to be both:
 - technologically available,
 - economically achievable, and
 - have acceptable non-water quality environmental impacts (including energy requirements).
- ELGs may also include process changes and best management practices for pollution prevention.

Key Points:*Overview of the Process of Developing Effluent Limitations Guidelines*

- To date, EPA has promulgated 59 ELGs that collectively have reduced billions of pounds of pollutant discharges per year.
- The underlying analysis supporting an ELG is substantial and requires a number of resource intensive data collection activities including:
 - site visits to facilities to better understand the industrial operations.
 - wastewater samples to characterize pollutants in the wastewater and the ability of selected technologies to remove them.
 - OMB approved surveys to collect technical and economic information about the industry (historically, these are often legally required surveys under CWA Section 308).
- This data is used by EPA for a number of detailed analyses to determine if:

Internal/Deliberative

- selected technologies are compatible with the industry wastewater characteristics, and installation of the technology is technically feasible at the facilities.
- selected technologies are economically achievable by the industry.
- This resources intensive process normally requires:

Ex. 5 Deliberative Process (DP)

The Engineering and Analysis Division

- OST's Engineering and Analysis Division (EAD), in partnership with the OGC Water Law Office, is the only group with the experience and expertise necessary to produce legally-defensible ELG rulemakings.

Ex. 5 Deliberative Process (DP)

Upcoming Milestones: (Include any near-term actions or decisions)

Ex. 5 Deliberative Process (DP)

- Two petitions for review filed by Appalachian Voices, Clean Water Action et al. were consolidated in the 4th Cir. Ct. of Appeals. *Appalachian Voices v. EPA*, No. 20-2187.

Point of Contact:

Deborah Nagle, OST

Appointment

From: Owscheduling [Owscheduling@epa.gov]
Sent: 2/2/2021 3:24:04 PM
To: Owscheduling [Owscheduling@epa.gov]; Fox, Radhika [Fox.Radhika@epa.gov]; Best-Wong, Benita [Best-Wong.Benita@epa.gov]; Goodin, John [Goodin.John@epa.gov]; Nagle, Deborah [Nagle.Deborah@epa.gov]; Wood, Robert [Wood.Robert@epa.gov]; Scozzafava, MichaelE [Scozzafava.MichaelE@epa.gov]; Huff, Lisa [Huff.Lisa@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; Benware, Richard [Benware.Richard@epa.gov]; Flanders, Phillip [Flanders.Phillip@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]; Zomer, Jessica [Zomer.Jessica@epa.gov]; Allen, Ashley [Allen.Ashley@epa.gov]; Covington, James [Covington.James@epa.gov]; Sabater, Juan [Sabater.Juan@epa.gov]; Lousberg, Macara [Lousberg.Macara@epa.gov]
CC: Weyer, Erica [weyer.eric@epa.gov]
Subject: Steam Electric Rule
Attachments: Steam Transition Briefing_20210208.pptx
Location: Microsoft Teams Meeting
Start: 2/9/2021 7:00:00 PM
End: 2/9/2021 7:45:00 PM
Show Time As: Busy

Required Attendees: Fox, Radhika; Benita Best-Wong; Goodin, John; Nagle, Deborah; Wood, Robert (Wood.Robert@epa.gov); Scozzafava.MichaelE@epa.gov; Huff, Lisa; Damico, Brian; Benware, Richard; Flanders, Phillip; Hoffer, Melissa; Steven Neugeboren; MaryEllen Levine; Zomer, Jessica; Allen, Ashley; Covington, James; Sabater, Juan; Lousberg, Macara
Optional Attendees: Weyer, Erica

Purpose of the meeting: Provide an overview of the Steam Electric Reconsideration (2020) Rule and current litigation in consideration for upcoming Brief due 2/24/2021.

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2020 Steam Electric Reconsideration Rule

Transition Briefing for Radhika Fox

February 9, 2021

Internal/Deliberative

1

Acronyms Used in This Briefing

- **BA** (bottom ash)
- **BAT** (best available technology economically achievable)
- **BMP** (best management practices)
- **BPT** (best practical control technology)
- **CCR** (coal combustion residual)
- **DOE** (Department of Energy)
- **EGU** (electric generating unit)
- **ELG** (effluent limitations guideline)
- **FGD** (flue gas desulfurization)
- **PSES** (pretreatment standards for existing sources)
- **TVA** (Tennessee Valley Authority)
- **VIP** (voluntary incentives program)

Overview

- Purpose
- History and Background
- Summary of What Changed
 - Flue gas desulfurization (FGD) wastewater
 - Bottom ash (BA) transport water
 - New subcategories
 - Implementation timing
- Questions to Ponder
- Litigation on the 2020 Rule
- Decisions Needed Today and Next Steps on Additional Briefings

Purpose

- The purpose of this briefing is to:
 - Provide history and background on the Steam Electric Effluent Limitations Guidelines (ELGs);
 - Tee up issues and considerations for future decision-making; and
 - Obtain approval to seek an abeyance in current litigation

History and Background

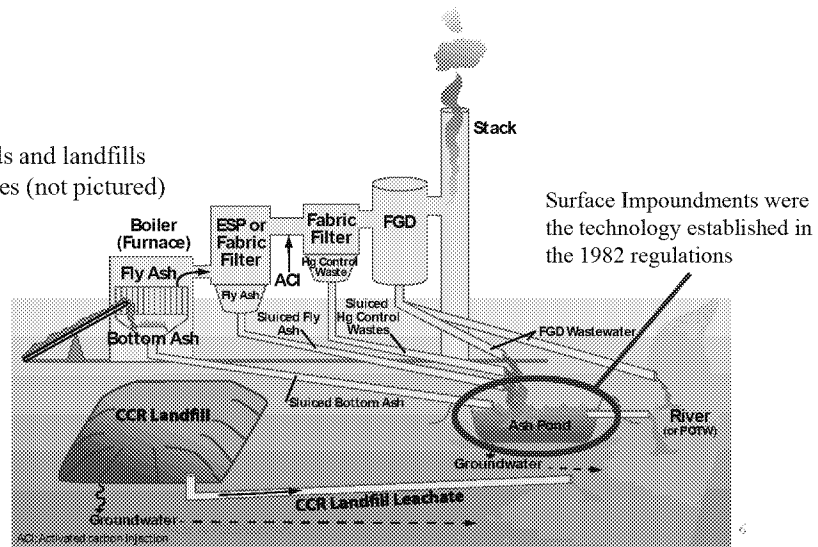
- In 2015, EPA issued a final rule updating the 1982 effluent limitations guidelines and standards (ELGs) for steam electric power plants.
 - A steam electric power plant (plant) consists of one or more electric generating units (EGUs) which produce electricity primarily through the use of fossil or nuclear fuels to generate steam to turn a turbine
 - Coal-fired power plants, a subset of plants covered in the 2015 rule, generate several pollutant streams which are released into the air, water, and land
 - These coal-derived waste streams make up the majority of those regulated in the 2015 rule (see figure on next slide)

History and Background

- FGD wastewater
- Fly ash transport water
- BA transport water
- Mercury (Hg) control waste
- Leachate from ash/FGD ponds and landfills
- Gasification process discharges (not pictured)

Notes:

- Also addressed legacy wastewaters (any of the above wastewaters generated before the implementation dates for the new, more stringent BAT)
- Companion coal combustion residual (CCR) rule regulates solid waste disposal



6/16/2022

History and Background

- The 2015 rule was subject to multiple legal challenges (7 petitions for review from environmental, industry and drinking water groups) and two administrative petitions for reconsideration.
- In 2018, EPA announced it would reconsider the Steam Electric ELGs through a new rulemaking* with respect to:
 - Flue gas desulfurization (FGD) wastewater and
 - Bottom ash (BA) transport water
- The final reconsideration rule, signed on August 31, 2020, contains revised ELGs for these two waste streams.

*EPA did not reconsider limits for fly ash transport water or certain other wastestreams.

Internal/Deliberative

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Summary of the 2020 Rule: What Changed?

- Revises the technology basis, limitations, and compliance dates for
 - FGD wastewater (both generally applicable limitations and the more stringent voluntary incentives program [VIP¹] limitations); and
 - BA transport water.
- Creates new subcategories (point source discharges subject to differentiated treatment) with less stringent limitations and compliance dates for
 - High FGD flow power plants,
 - Low-utilization electric generating units (i.e., “peakers”), and
 - Electric generating units permanently ceasing coal combustion by 2028 (i.e., retiring or converting to a non-coal fuel)

¹ The VIP allows facilities additional time in exchange for meeting more stringent limitations through the adoption of more advanced treatment technologies Internal/Deliberative

Summary of the 2020 Rule: FGD Limits

| Pollutant or pollutant property | Year | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Change |
|---------------------------------|------|-----------------------|--|----------------|
| Arsenic, total (ug/L) | 2015 | 11 | 8 | Negligible |
| | 2020 | 18 | 8 | |
| Mercury, total (ng/L) | 2015 | 788 | 356 | More Stringent |
| | 2020 | 103 | 34 | |
| Selenium, total (ug/L) | 2015 | 23 | 12 | Less Stringent |
| | 2020 | 70 | 29 | |
| Nitrate/nitrite as N (mg/L) | 2015 | 17.0 | 4.4 | More Stringent |
| | 2020 | 4 | 3 | |

Summary of the 2020 Rule: FGD Voluntary Incentive Program (VIP) Limits

| Pollutant or pollutant property | Year | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Change |
|---------------------------------|------|-----------------------|--|----------------|
| Arsenic, total (ug/L) | 2015 | 4 | N/A | Negligible |
| | 2020 | 5 | N/A | |
| Mercury, total (ng/L) | 2015 | 1.8 | 1.3 | Less Stringent |
| | 2020 | 23 | 10 | |
| Selenium, total (ug/L) | 2015 | 453 | 227 | More Stringent |
| | 2020 | 10 | N/A | |
| Nitrate/nitrite as N (mg/L) | 2020 | 2.0 | 1.2 | New Limit |
| Bromide (mg/L) | 2020 | 0.2 | N/A | New Limit |
| TDS (mg/L) | 2015 | 38 | 22 | Less Stringent |
| | 2020 | 306 | 149 | |

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Summary of the Final Rules: BA Limits

- 2015 Rule BAT/PSES:

- Zero Discharge

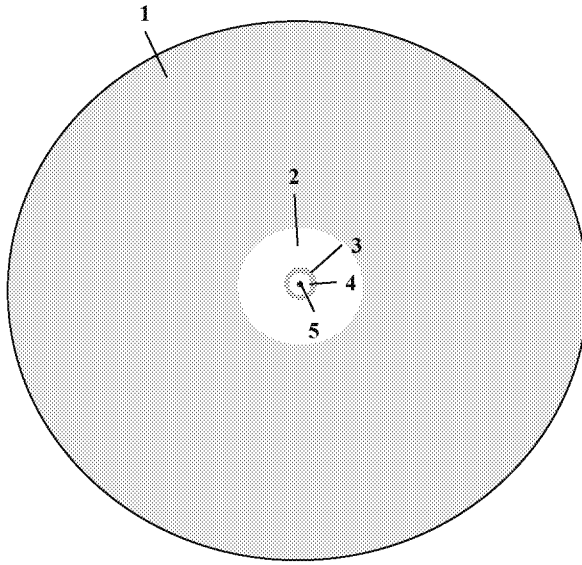
- Compliance using dry system (does not generate BA transport water)
 - or*
 - Compliance using a wet system (must achieve 100% recycle)

- 2020 Rule BAT/PSES:

- Site-Specific Purge

- May still comply using a dry system that does not generate BA transport water
 - or*
 - If compliance is using a wet system, may request a site-specific purge determination from the permitting authority

Summary of the 2020 Rule: BA Limits



- 1) **Current Discharges**: 100% of surface impoundment (SI) influent
- 2) **Rolling 30-Day Average Cap**: 10% of primary active wetted system volume (includes volumes of primary tanks, pipes, etc. but no SI volume) §423.11(aa)-(bb) and §423.13(k)(2)(i)(B) or §423.16(g)(2)(i)(B)
- 3) **Must Be Allowable Purges**: four allowable purges See §423.13(k)(2)(i)(A)(1)-(4) or §423.16(g)(2)(i)(A)(1)-(4)
- 4) **Must Be Necessary Purges**: “cannot be managed within the system” §423.19(c)(3)(G)
- 5) **Further Purge Treatment**: permitting authorities establish limits using Best Professional Judgement (BPJ) §423.11(cc) 12

(internal/Declarative)

Summary of the 2020 Rule: Subcategories

- EPA created three new subcategories which were all given less stringent limitations
- These new subcategories were not estimated to impact a large portion of the steam electric industry (estimated counts below)

| Grouping or Subcategory | # of Plants* | # of EGUs |
|---|-----------------|------------|
| All Coal-Fired Steam Electric | 218 | 427 |
| →Subset with FGD Wastewater Discharges ¹ | 56 | 135 |
| →Subset with BA Transport Water Discharges ¹ | 94 | 214 |
| High FGD Flow Subcategory | 1 | 2 |
| Low Utilization EGUs Subcategory | 4 ² | 6 |
| Permanent Cessation of Coal Combustion EGUs Subcategory | 12 ² | 23 |

¹ Plants and EGUs with FGD and BA discharges overlap, and the 2020 rule only impacts 108 plants total

² Since the low utilization and ceasing combustion of coal subcategories impact individual EGUs, not all EGUs at a plant qualify

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Summary of the 2020 Rule: Subcategories

- High FGD Flow Plants (FGD Wastewater ONLY)
 - Plant does not have to meet selenium or nitrogen limits (technology basis is chemical precipitation, only)
 - EPA data indicate that only one plant (TVA Cumberland) qualifies for this subcategory

| Pollutant or pollutant property | Year | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Change |
|---------------------------------|------|-----------------------|--|---------------|
| Arsenic, total (ug/L) | 2015 | 11 | 8 | None |
| | 2020 | 11 | 8 | |
| Mercury, total (ng/L) | 2015 | 788 | 356 | None |
| | 2020 | 788 | 356 | |
| Selenium, total (ug/L) | 2015 | 23 | 12 | Limit Removed |
| Nitrate/nitrite as N (mg/L) | 2015 | 17.0 | 4.4 | Limit Removed |

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Summary of the 2020 Rule: Subcategories

- Low utilization EGUs (FGD Wastewater)
 - Like limitations for high FGD flow plants, the plant does not have to meet limitations for selenium and nitrogen
 - FGD systems are designed for an entire plant, so plants with both high and low utilization EGUs (if any) are likely to meet the standard limitations even for any low utilization EGUs

| Pollutant or pollutant property | Year | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Change |
|---------------------------------|------|-----------------------|--|---------------|
| Arsenic, total (ug/L) | 2015 | 11 | 8 | None |
| | 2020 | 11 | 8 | |
| Mercury, total (ng/L) | 2015 | 788 | 356 | None |
| | 2020 | 788 | 356 | |
| Selenium, total (ug/L) | 2015 | 23 | 12 | Limit Removed |
| Nitrate/nitrite as N (mg/L) | 2015 | 17.0 | 4.4 | Limit Removed |

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Summary of the 2020 Rule: Subcategories

- Low utilization EGUs (BA Transport Water)
 - Unlike limitations for non-subcategorized EGUs, BAT limitations for this subcategory are set equal to BPT limitations
 - In addition, facilities must develop and implement a best management practices (BMP) plan which maximizes wastewater recycling to the extent feasible
 - The BMP plan does not require purges to be below 10%; however, where a low utilization EGU has an existing high recycle rate system the BMP plan will effectively limit purges to the same range as the rest of the industry.

Summary of the Final Rule: Subcategories

- EGU's Permanently Ceasing Coal Combustion (FGD Wastewater)
 - Unlike the rest of the industry or subcategories, BAT limitations for this subcategory are permanently set equal to BPT and therefore do not regulate mercury, arsenic, selenium, or nitrate/nitrite
 - Three of five plants with EGU's qualifying for this subcategory and discharging FGD wastewater already operate advanced FGD wastewater treatment systems (all three operate chemical precipitation while one also operates biological treatment)

| Pollutant or pollutant property | Year | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Change |
|---------------------------------|------|-----------------------|--|---------------|
| Arsenic, total (ug/L) | 2015 | 11 | 8 | Limit Removed |
| Mercury, total (ng/L) | 2015 | 788 | 356 | Limit Removed |
| Selenium, total (ug/L) | 2015 | 23 | 12 | Limit Removed |
| Nitrate/nitrite as N (mg/L) | 2015 | 17.0 | 4.4 | Limit Removed |

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Summary of the 2020 Rule: Subcategories

- EGUs permanently ceasing combustion of coal by 2028 (BA Transport Water)
 - Like the previous subcategory, BAT limitations for this subcategory are set equal to BPT limitations
 - Unlike the previous subcategory, no BMP plan is required for this subcategory
 - Four of nine plants with EGUs that EPA projects qualify for this subcategory and discharge BA transport water already operate high recycle rate systems

Summary of the 2020 Rule: Timing

- Compliance deadline is “as soon as possible” and “no later than” dates specified in the final rule.
 - Earliest date: October 13, 2021
 - No later than date: Wastestream/subcategory dependent (see next slide)
- Permitting authorities must consider the following site-relevant factors:^{1, 2}
 - Time necessary to expeditiously plan, design, procure, and install equipment
 - Changes being made or planned in response to other EPA air and waste regulations (e.g., CCR Part A final rule)
 - An initial commissioning period for FGD wastewater
 - Other factors as appropriate

¹ The 2020 rule does not revise the specified factors that the NPDES permitting authority must consider in determining the as soon as possible date under the 2015 rule. *See* §423.11(t).

² Applicability date for VIP limitations are not determined through application of §423.11(t) but is instead simply December 31, 2028.

Summary of the Final Rule: Timing

- For Pretreatment Standards for Existing Sources (PSES), no later than October 13, 2023.
- For direct discharges, no later than:

| Limits | FGD Wastewater | BA Transport Water |
|-------------------------------------|------------------------|---|
| Generally Applicable Limitations | December 31, 2025 | December 31, 2025 |
| High Flow Subcategory | December 31, 2023 | N/A |
| Low utilization Subcategory | December 31, 2023 | Discharge limits are immediately applicable; BMP plans must be completed by December 31, 2023 |
| Ceasing coal combustion Subcategory | Immediately Applicable | Immediately Applicable |
| VIP | December 31, 2028 | N/A |

Note: The 2015 rule “no later than” dates for all wastewaters was November 1, 2018 for indirect dischargers and December 31, 2023 for direct dischargers

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Other Questions to Ponder...

Ex. 5 Deliberative Process (DP)

Other Questions to Ponder (cont'd)...

Ex. 5 Deliberative Process (DP)

Other Questions to Ponder (cont'd)...

Ex. 5 Deliberative Process (DP)

Litigation on the 2020 Rule

- 2 petitions for review filed by Appalachian Voices, Clean Water Action et al. were consolidated in the 4th Cir. Ct. of Appeals. *Appalachian Voices v. EPA*, No. 20-2187.
- Case stayed until Feb. 24, 2021, which is the deadline for filing petitions for review.
- We can expect petitioners to raise some of the following issues in the litigation, which were the focus of their public comments:

Ex. 5 Deliberative Process (DP)

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Decisions Needed and Next Steps

- **Decision Needed Today:** Approval to seek an abeyance in the Fourth Circuit before February 24

- Lay of the land for current litigation (OGC)

Ex. 5 Deliberative Process (DP)

- **Future Decision:** Substantive decision on potential reconsideration
- **Next Steps:**

Ex. 5 Deliberative Process (DP)

Appendix Contents

- Illustrative timeline of 2020 rule implementation (slide 27)
- Regulatory options considered in the 2015 final rulemaking (slide 28) and in the 2020 final rulemaking (slide 29)
- Table of EGUs retiring or repowering between January 1, 2024 and December 31, 2028 (slides 30-31)

Preliminary Decisions, Some May Change

Final Decisions, Implementation Underway

Ongoing:
Company reads the final regulation, conducts scoping analysis and regular integrated resource plan analyses, pilot tests equipment, begins raising capital, seeks bids, may transfer under §423.13(o)

10/13/2021:
If a company believes it will participate in a subcategory or VIP, the company files a Notice of Planned Participation (NOPP)* with its permitting authority or control authority

12/31/2023:
High FGD flow plants and LUEGUs must meet applicable requirements; no further transfer into LUEGU subcategory under §423.13(o)

12/31/2025:
Implementation of generally applicable requirements; no further transfer between limitations is permitted under §423.13(o)

12/31/2028:
Implementation of VIP limits; final date to retire/repower

***Ongoing for those filing a NOPP:**

- (1) File annual progress reports/certifications with the permitting authority or control authority.
- (2) File a notice of material delay, if necessary. §423.19(j)

Internal/Confidential

2015 Rule Regulatory Options

| Wastestreams | Technology Basis for the BAT Regulatory Options | | | | | |
|------------------------------------|---|---|--|---|---|--------------------------|
| | A | B | C | D | E | F |
| FGD Wastewater | Chemical Precipitation | Chemical Precipitation + Biological Treatment | Chemical Precipitation + Biological Treatment | Chemical Precipitation + Biological Treatment | Chemical Precipitation + Biological Treatment | Evaporation |
| Fly Ash Transport Water | Dry Handling | Dry Handling | Dry handling | Dry handling | Dry handling | Dry handling |
| Bottom Ash Transport Water | Impoundment (Equal to BPT) | Impoundment (Equal to BPT) | Dry handling/Closed loop (for units >400 MW); Impoundment (Equal to BPT) (for units ≤400 MW) | Dry handling/Closed loop | Dry handling/Closed loop | Dry handling/Closed loop |
| FGMC Wastewater | Dry handling | Dry handling | Dry handling | Dry handling | Dry handling | Dry handling |
| Gasification Wastewater | Evaporation | Evaporation | Evaporation | Evaporation | Evaporation | Evaporation |
| Combustion Residual Leachate | Impoundment (Equal to BPT) | Impoundment (Equal to BPT) | Impoundment (Equal to BPT) | Impoundment (Equal to BPT) | Chemical Precipitation | Chemical Precipitation |
| Non-Chemical Metal Cleaning Wastes | [Reserved] | [Reserved] | [Reserved] | [Reserved] | [Reserved] | [Reserved] |

- Option D was selected as the basis for the BAT effluent limitations.
- For all units 50MW and smaller (and for oil-fired units of any size), BAT limits for all wastestreams are set equal to the 1982 BPT regulation, based on settling ponds.
- For legacy wastes, BAT limits for all wastestreams are set equal to the 1982 BPT regulation, based on settling ponds.
- Created a voluntary incentives program (VIP) for FGD wastewater based on evaporation.

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Table ES-1: Regulatory Options

| Wastestream | Subcategory | Technology Basis for BAT/PSES Regulatory Options [Compliance Timing] ^b | | | | |
|----------------------------|--|---|---------------------------------------|--|--|---------------------------------------|
| | | 2015 Rule (Baseline) | Option D ^c | Option A | Option B | Option C |
| FGD Wastewater | NA (default) ^a | Chemical Precipitation + HRTR Biological Treatment [2021-2023] | Chemical Precipitation [2021-2023] | Chemical Precipitation + LRTR Biological Treatment [2021-2025] | Chemical Precipitation + LRTR Biological Treatment [2021-2025] | Membrane Filtration [2024-2028] |
| | High FGD Flow Facilities: Plant-level scrubber purge flow >4 MGD | NS | NS | Chemical Precipitation [2021-2023] | NS | NS |
| | Low Utilization Boilers: All units have 24-month average utilization < 10% | NS | NS | Chemical Precipitation [2021-2023] | NS | NS |
| | Generating units ceasing combustion of coal by December 31, 2028 | NS | NS ^d | Surface Impoundment | NS | NS |
| | FGD Wastewater Voluntary Incentives Program (Direct Dischargers Only) | Chemical Precipitation + Evaporation [2023] | Membrane Filtration [2028] | Membrane Filtration [2025] | Membrane Filtration [2028] | NA |
| Bottom Ash Transport Water | NA (default) ^a | Dry Handling / Closed loop [2021-2023] | High Recycle Rate Systems [2021-2023] | High Recycle Rate Systems [2021-2025] | High Recycle Rate Systems [2021-2025] | High Recycle Rate Systems [2021-2025] |
| | Low Utilization Boilers: All units have 24-month average utilization < 10% | NS | NS | Surface Impoundment + BMP Plan [2021-2023] | NS | NS |
| | Generating units ceasing combustion of coal by December 31, 2028 | NS | NS ^d | Surface Impoundment | NS | NS |

Abbreviations: BMP = Best Management Practice; HRTR = High Hydraulic Residence Time; LRTR = Low Hydraulic Residence Time; NS = Not subcategorized; NA = Not applicable

a. The table above does not present existing subcategories included in the 2015 rule as EPA did not reopen the existing subcategorization of oil-fired units or units with a nameplate capacity of 50 MW or less.

b. The compliance timing is 2021-2023 for indirect dischargers across all options.

c. Option D corresponds to proposed Option 1.

d. Option 1 as proposed used surface impoundment as the technology basis for electric generating units ceasing combustion of coal by December 31, 2028. In its 2019 analysis, however, EPA did not specifically subcategorize these boilers but instead omitted these boilers from the analysis (see U.S. EPA, 2019a).

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Table 1 – Costs for EGU's (Absent Subcategorization) with Announced Dates for Retiring or Converting Fuels of 2024-2028

| Count | Power plant | Unit | Retire/Repower Date | Capital Costs | O&M Costs | Annualized Over Years Remaining | 20-yr \$/MWh | Adjusted \$/MWh |
|-------|---|-----------|---------------------|---------------|-------------|---------------------------------|--------------|-----------------|
| 1 | Rockport | SE Unit-1 | 2028 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 2 | Allen Steam Station | SE Unit-4 | 2028 | \$248,857 | \$17,354 | \$39,031 | \$0.26 | \$0.28 |
| 3 | Allen Steam Station | SE Unit-5 | 2028 | \$248,867 | \$18,593 | \$60,271 | \$0.12 | \$0.18 |
| 4 | Allen & Kang Generating Plant | SE Unit-1 | 2028 | \$20,697,956 | \$2,175,463 | \$5,557,971 | \$1.45 | \$1.95 |
| 5 | PPL Brunner Island | SE Unit-1 | 2028 | \$14,178,286 | \$1,304,569 | \$3,729,215 | \$4.73 | \$8.61 |
| 6 | PPL Brunner Island | SE Unit-2 | 2028 | \$16,353,489 | \$1,315,087 | \$4,053,769 | \$4.05 | \$5.74 |
| 7 | PPL Brunner Island | SE Unit-3 | 2028 | \$28,483,891 | \$1,813,653 | \$6,384,119 | \$3.64 | \$4.44 |
| 8 | NIPSCO Michigan City Generating Station | SE Unit-1 | 2028 | \$1,045,342 | \$0 | \$175,044 | \$0.06 | \$0.11 |
| 9 | Jim Bridger Power Plant | SE Unit-2 | 2028 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 10 | McMicken Station | SE Unit-1 | 2028 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 11 | McMicken Station | SE Unit-2 | 2028 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 12 | Colstrip | SE Unit-3 | 2027 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 13 | Colstrip | SE Unit-4 | 2027 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 14 | White Bluff Plant | SE Unit-1 | 2027 | \$26,522 | \$33 | \$4,954 | \$0.00 | \$0.00 |
| 15 | White Bluff Plant | SE Unit-2 | 2027 | \$26,522 | \$35 | \$4,956 | \$0.00 | \$0.00 |
| 16 | Dave Johnston Plant | SE Unit-1 | 2027 | \$6,690,598 | \$1,682,956 | \$2,324,418 | \$2.78 | \$3.75 |
| 17 | Dave Johnston Plant | SE Unit-2 | 2027 | \$6,690,598 | \$1,094,861 | \$2,336,123 | \$2.46 | \$3.33 |
| 18 | Dave Johnston Plant | SE Unit-3 | 2027 | \$5,997,504 | \$1,395,806 | \$3,250,838 | \$1.70 | \$2.37 |
| 19 | Dave Johnston Plant | SE Unit-4 | 2027 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 20 | Intermountain Power Project | SE Unit-1 | 2027 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 21 | Intermountain Power Project | SE Unit-2 | 2027 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 22 | Winyah Generating Station | SE Unit-1 | 2027 | \$12,574,491 | \$519,461 | \$2,943,695 | \$3.71 | \$4.95 |
| 23 | Winyah Generating Station | SE Unit-2 | 2027 | \$14,146,474 | \$690,087 | \$3,315,011 | \$6.24 | \$10.21 |
| 24 | Craig Station | SE Unit-2 | 2026 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 25 | Northeastern Power Station | SE Unit-3 | 2026 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 26 | Dolet Hills Power Station | SE Unit-1 | 2026 | \$23,407,563 | \$2,723,514 | \$7,634,280 | \$2.85 | \$4.41 |
| 27 | Interstate Power and Light - Prairie Creek Generating Station | SE Unit-1 | 2025 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 28 | Interstate Power and Light - Prairie Creek Generating Station | SE Unit-2 | 2025 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 29 | Interstate Power and Light - Prairie Creek Generating Station | SE Unit-3 | 2025 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 30 | Big Cajun 2 | SE Unit-1 | 2025 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 31 | Sherburne County Generating Plant | SE Unit-1 | 2025 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |

Internal/Deliberative

| Count | Power plant | Unit | Retire/ Repower Date | Capital Costs | O&M Costs | Annualized Over Years Remaining | 20-yr \$/MWh | Adjusted \$/MWh |
|-------|-------------------------------------|-----------|----------------------------|------------------|--------------|---------------------------------------|-----------------|--------------------|
| 32 | TransAlta Centralia Generation, LLC | SE Unit-2 | 2025 | \$12,191,588 | \$536,223 | \$3,509,638 | \$0.57 | \$1.18 |
| 33 | Cholla Power Plant | SE Unit-1 | 2025 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 34 | Cholla Power Plant | SE Unit-3 | 2025 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 35 | North Valley Generating Station | SE Unit-2 | 2025 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 36 | Naughton Power Plant | SE Unit-1 | 2025 | \$7,985,008 | \$1,663,947 | \$3,611,416 | \$2.97 | \$3.10 |
| 37 | Naughton Power Plant | SE Unit-2 | 2025 | \$9,428,931 | \$1,792,440 | \$4,095,044 | \$1.73 | \$2.64 |
| 38 | Comanche Station | SE Unit-2 | 2025 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 39 | Erickson Station | SE Unit-1 | 2025 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 40 | Allen Steam Station | SE Unit-1 | 2024 | \$149,320 | \$11,156 | \$55,239 | \$0.51 | \$0.68 |
| 41 | Allen Steam Station | SE Unit-2 | 2024 | \$149,320 | \$11,156 | \$55,239 | \$0.50 | \$0.65 |
| 42 | Allen Steam Station | SE Unit-3 | 2024 | \$248,867 | \$17,354 | \$90,826 | \$0.22 | \$0.48 |
| 43 | C D McIntosh Jr. Power Plant | SE Unit-3 | 2024 | \$5,694,697 | \$349,820 | \$2,031,055 | \$0.59 | \$1.34 |
| 44 | JT Deely Steam Electric Station | SE Unit-1 | 2024 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 45 | JT Deely Steam Electric Station | SE Unit-2 | 2024 | \$0 | \$0 | \$0 | \$0.00 | \$0.00 |
| 46 | Will County Station | SE Unit-4 | 2024 | \$16,938,308 | \$1,902,190 | \$7,493,311 | \$5.16 | \$10.47 |

Internal/Deliberation

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Appointment

From: Reed, Kristen [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=76812549FBB44D1F8E9EF4E7CC247B5B-REED, KRISTEN]
Sent: 4/26/2021 6:35:27 PM
To: Best-Wong, Benita [Best-Wong.Benita@epa.gov]; Nagle, Deborah [Nagle.Deborah@epa.gov]; Wood, Robert [Wood.Robert@epa.gov]; Scozzafava, MichaelE [Scozzafava.MichaelE@epa.gov]; Huff, Lisa [Huff.Lisa@epa.gov]; Benware, Richard [Benware.Richard@epa.gov]; Covington, James [Covington.James@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]; Zomer, Jessica [Zomer.Jessica@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Flanders, Phillip [Flanders.Phillip@epa.gov]; Allen, Ashley [Allen.Ashley@epa.gov]; Weyer, Erica [weyer.eric@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]
CC: Reed, Kristen [Reed.Kristen@epa.gov]
Subject: Steam Electric ELG
Attachments: Administrator Briefing Memo Steam 15APR2021 clean.docx; Administrator Briefing Memo Steam 14APR2021 Attach4.docx; Administrator Briefing Memo Steam 09APR2021 Attach1.docx; Administrator Briefing Memo Steam 08APR2021 Attach3.docx; Administrator Briefing Memo Steam 09APR2021 Attach2.docx
Location: Microsoft Teams Meeting
Start: 4/27/2021 1:00:00 PM
End: 4/27/2021 2:00:00 PM
Show Time As: Busy

Required Attendees: Nagle, Deborah; Wood, Robert; Scozzafava, MichaelE; Huff, Lisa; Benware, Richard; Covington, James; Levine, MaryEllen; Zomer, Jessica; Neugeboren, Steven; Flanders, Phillip; Allen, Ashley; Weyer, Erica; Damico, Brian; Hoffer, Melissa
Optional Attendees: Reed, Kristen

Microsoft Teams meeting

Join on your computer or mobile app

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Briefing Memo – Steam Electric Reconsideration Rule; Litigation

Printed on MM/DD/YYYY

Filed: MM/DD/YYYY X:XX AM/PM (FOR SCHEDULING) (if updated note in italics and in green font).

BRIEFING MEMO

April XX, 2021

MEMORANDUM FOR THE ADMINISTRATOR

FROM: Radhika Fox, OW, [PHONE NUMBER], [EMAIL]

SUBJECT: Overview of 2020 Steam Electric Reconsideration Rule Review

DATE: [N/A]

TIME: [N/A]

I. REQUESTING OFFICE

Office of Water

II. TIMING

By May 11 need an Administrator decision on how to proceed with E.O. 13990 review of the Steam Electric Reconsideration Rule (2020 rule) and pending Fourth Circuit litigation so we can signal our course of action to the Court. External drivers of the timeline are the expiration of the existing abeyance on May 25 and publication of the Spring Regulatory Agenda.

III. PURPOSE

Provide Administrator with overview of 2020 Rule to support decision making on rule and litigation strategy options.

IV. BACKGROUND AND HISTORY

Clean Water Act sections 301(b)(2)(A) and 304(b)(2)(B) require that, for existing sources EPA establish effluent limitations based on the “best available technology economically achievable” (BAT). Prior to 2015, EPA last revised BAT for the steam electric industrial category in 1982. In 2015, EPA established BAT in a rule that was later postponed in part while EPA conducted a rulemaking to revise those limitations. Revisions were finalized in the 2020 rule, and implementation begins October 2021.

[PAGE] of [NUMPAGES]



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Two petitions for review of the 2020 rule were filed in court by a consortium of environmental petitioners, and these petitions were consolidated in the Fourth Circuit Court of Appeals.

V. REGULATORY SUMMARY (2020 RULE)

The 2020 rule revised the technology basis, limitations, and compliance dates for FGD wastewater and bottom ash transport water (see Appendices 2 and 3 for more detail). The rule also created three new subcategories subject to less stringent limitations.

Ex. 5 AC/DP



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Ex. 5 AC/DP



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Ex. 5 AC/DP



Briefing Memo – Steam Electric Reconsideration Rule; Litigation

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Attachment 4:

Steam Electric Industry Big Picture Overview

- OST is involved in a number of actions related to the Steam Electric industrial category, including:
- 2020 Steam Electric Reconsideration Rule
 - In 2020, EPA finalized the Steam Electric Reconsideration Rule which modified the limits for two of the seven wastestreams that were updated in the 2015 rule: Flue Gas Desulphurization (FGD) wastewater and Bottom Ash (BA) transport water.
 - E.O.13990 directed the Agency to review this rule for potential reconsideration.
 - Litigation on the 2020 Rule is in abeyance until May 25th, at which time the Agency will need to inform the court whether it intends to defend the rule.
- 2015 Limits for Combustion Residual Leachate and Legacy Wastewater
 - In 2019, the Fifth Circuit vacated the 2015 Rule limitations for two wastestreams: combustion residual leachate and legacy wastewater.
 - The 2015 Rule set the limits for these wastestreams equal to the 1982 limits, which the court ruled was arbitrary and violated the Clean Water Act.
 - EPA has indicated, through the Unified Regulatory Agenda, that the Agency may conduct a rulemaking to address these wastestreams.

Ex. 5 AC/DP

- Challenge to Merrimack Station Permit
 - Region 1 issued a NPDES permit to Merrimack Station with technology-based limits applicable to combustion residual leachate wastestream.
 - The permit sets limits for leachate equal to the 1982 limits rather than allowing the limits to be set at the discretion of the permitting authority on a site-specific, Best Professional Judgment (“BPJ”) basis.

Ex. 5 AC/DP

- Efforts that build on the 2020 Steam Electric Reconsideration Rule



Briefing Memo – Steam Electric Reconsideration Rule; Litigation

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Ex. 5 AC/DP



Briefing Memo – Steam Electric Reconsideration Rule; Litigation

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Attachment 3:

Additional Information on Bottom Ash Transport Water

Ex. 5 AC/DP



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Ex. 5 AC/DP



Briefing Memo – Steam Electric Reconsideration Rule; Litigation

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Attachment 2:

Additional Information on FGD Wastewater

Ex. 5 AC/DP



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Ex. 5 AC/DP

² There were seven plants with biological treatment installed at the time of the 2020 rule issuance and although EPA has not continued to track installations as closely as during the rulemaking process, EPA is aware of several more with contracts in place for such systems.



Briefing Memo – Steam Electric Reconsideration Rule; Litigation

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Table 1: Summary of the FGD Limits in 2020 vs 2015

| Pollutant or pollutant property | Year | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Change |
|---------------------------------|------|-----------------------|--|----------------|
| Arsenic, total (ug/L) | 2015 | 11 | 8 | Negligible |
| | 2020 | 18 | 8 | |
| Mercury, total (ng/L) | 2015 | 788 | 356 | More Stringent |
| | 2020 | 103 | 34 | |
| Selenium, total (ug/L) | 2015 | 23 | 12 | Less Stringent |
| | 2020 | 70 | 29 | |
| Nitrate/nitrite as N (mg/L) | 2015 | 17.0 | 4.4 | More Stringent |
| | 2020 | 4 | 3 | |



Briefing Memo – Steam Electric Reconsideration Rule; Litigation

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Table 2: Summary of the FGD VIP Limits in 2020 vs 2015

| Pollutant or pollutant property | Year | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Change |
|---------------------------------|------|-----------------------|--|----------------|
| Arsenic, total (ug/L) | 2015 | 4 | N/A | Negligible |
| | 2020 | 5 | N/A | |
| Mercury, total (ng/L) | 2015 | 1.8 | 1.3 | Less Stringent |
| | 2020 | 23 | 10 | |
| Selenium, total (ug/L) | 2015 | 453 | 227 | More Stringent |
| | 2020 | 10 | N/A | |
| Nitrate/nitrite as N (mg/L) | 2020 | 2.0 | 1.2 | New Limit |
| Bromide (mg/L) | 2020 | 0.2 | N/A | New Limit |
| TDS (mg/L) | 2015 | 38 | 22 | Less Stringent |
| | 2020 | 306 | 149 | |

Appointment

From: Reed, Kristen [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=76812549fbb44d1f8e9ef4e7cc247b5b-Reed, Kristen]
Sent: 6/11/2021 11:16:08 AM
To: Best-Wong, Benita [Best-Wong.Benita@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Wood, Robert [Wood.Robert@epa.gov]; Nagle, Deborah [Nagle.Deborah@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; Huff, Lisa [Huff.Lisa@epa.gov]; Benware, Richard [Benware.Richard@epa.gov]; Flanders, Phillip [Flanders.Phillip@epa.gov]; Covington, James [Covington.James@epa.gov]; Allen, Ashley [Allen.Ashley@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]; Zomer, Jessica [Zomer.Jessica@epa.gov]; Scozzafava, MichaelE [Scozzafava.MichaelE@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Wood, Robert [Wood.Robert@epa.gov]; Nagle, Deborah [Nagle.Deborah@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; Huff, Lisa [Huff.Lisa@epa.gov]; Flanders, Phillip [Flanders.Phillip@epa.gov]; Covington, James [Covington.James@epa.gov]; Allen, Ashley [Allen.Ashley@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]; Zomer, Jessica [Zomer.Jessica@epa.gov]; Scozzafava, MichaelE [Scozzafava.MichaelE@epa.gov]
CC: Weyer, Erica [weyer.eric@epa.gov]; Reed, Kristen [Reed.Kristen@epa.gov]; Patrick, Monique [Patrick.Monique@epa.gov]; Weyer, Erica [weyer.eric@epa.gov]; Reed, Kristen [Reed.Kristen@epa.gov]; Patrick, Monique [Patrick.Monique@epa.gov]
Subject: Steam Electric
Attachments: Steam Follow-Up Analysis Memo 20210514.docx; 20210614 Agenda.docx; 20210614 Steam Briefing Memo b.docx
Location: Microsoft Teams Meeting
Start: 6/14/2021 5:00:00 PM
End: 6/14/2021 6:00:00 PM
Show Time As: Busy
Required Attendees: Hoffer, Melissa; Wood, Robert; Nagle, Deborah; Damico, Brian; Huff, Lisa; Benware, Richard; Flanders, Phillip; Covington, James; Allen, Ashley; Neugeboren, Steven; Levine, MaryEllen; Zomer, Jessica; Scozzafava, MichaelE
Optional Attendees: Weyer, Erica; Reed, Kristen; Patrick, Monique

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Steam Electric ELG Reconsideration Rule:

Analysis of Flue Gas Desulfurization (FGD) Wastewater

Purpose: The purpose of this memorandum is to get a decision on whether to revise the 2020 Steam Electric Rule. This memorandum presents

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Summary: OST staff compiled relevant information on the 64 coal-fired power plants with wet FGD that existed as of the 2020 rule

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

BOX 1 – Pollutant Types

Non-Salt Pollutants: these are pollutants treated by chemical precipitation plus biological treatment and include toxic/priority pollutants (mercury, arsenic, lead, etc.), nutrients (nitrogen and phosphorus), and inorganic unconventional pollutants (e.g., molybdenum).

Salt Pollutants: these are pollutants present in an ionic form that cannot be treated with chemical precipitation plus biological treatment (halogens, calcium, sodium, etc).

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

¹ Note that this is also the date under 423.19(h) that facilities will have to file a notice of planned participation in the voluntary incentives program's membrane-based limits;

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Information Compilation

OST compiled a list of the 64 coal-fired power plants with

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Analysis

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

provided examples.

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Ex. 5 AC/AWP/DP

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Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Steam Electric 2020 Rule Discussion

June 14, 2021

Agenda

1.

Ex. 5 Deliberative Process (DP)

2.

20

3. Discuss timeline and next steps for a decision meeting with the Administrator. EPA must inform the Fourth Circuit by July 26, 2021 if it intends to revise the effluent limitations guidelines (flue gas desulfurization (FGD) wastewater, bottom ash transport water, and/or subcategories).

Decision Timing

- **June 24** – OW pre-brief of Administrator briefing
- **July 07** – Administrator policy decision briefing
- **July 14** – Obtain final Administrator decision
- **July 15-25** – Develop public announcement and other press materials
- **July 26** – EPA responds to the Fourth Circuit & announces decision to public

Potential Revisions to the Steam Electric ELGs

Ex. 5 Deliberative Process (DP)

Driver: EPA must inform the Fourth Circuit by July 26, 2021 if it intends to revise the effluent limitations guidelines for FGD wastewater, bottom ash transport water, and/or subcategories.

Purpose of this paper:

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Timeline:

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

¹ If EPA decides no extensions will be granted the schedule would be compressed.

Message

From: Benware, Richard [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=4B2E011A22A44312A04299F118CC4D11-BENWARE, RICHARD]
Sent: 6/10/2021 1:14:30 PM
To: Damico, Brian [Damico.Brian@epa.gov]; Scozzafava, MichaelE [Scozzafava.MichaelE@epa.gov]
Subject: RE: Next Steam Briefing Materials
Attachments: Steam Briefing Memo_20210610_clean.docx; Agenda_clean.docx

So the highlighted footnote was because I wanted Jessica to make sure it was correct. It's been almost a decade since I last "bluebooked" a document with proper legal citations. Anyway, changes are made and documents reattached. Not sure that I have the final version of the previous memo that you wanted to include with this if one of you wants to attach it when you send it forward.

From: Damico, Brian <Damico.Brian@epa.gov>
Sent: Thursday, June 10, 2021 8:35 AM
To: Benware, Richard <Benware.Richard@epa.gov>; Scozzafava, MichaelE <Scozzafava.MichaelE@epa.gov>
Subject: RE: Next Steam Briefing Materials

Richard,

I have two suggested edits.

Ex. 5 Deliberative Process (DP)

Also I like you addition to the timeline, and in hindsight I have to say including the timeline does do a nice job of putting a more formal (and timely) end date for this back and forth... Mike and Deborah were right to want to include it.

-B

Brian D'Amico
Chief, Technology and Analytical Support Branch
Engineering and Analysis Division
Office of Science and Technology
U.S. Environmental Protection Agency
Washington, DC
(202) 566-1069 (Office)
Ex. 6 Personal Privacy (PP) (EPA Cell)

From: Benware, Richard <Benware.Richard@epa.gov>
Sent: Thursday, June 10, 2021 8:23 AM
To: Damico, Brian <Damico.Brian@epa.gov>; Scozzafava, MichaelE <Scozzafava.MichaelE@epa.gov>
Subject: RE: Next Steam Briefing Materials

Take a look...

From: Damico, Brian <Damico.Brian@epa.gov>
Sent: Thursday, June 10, 2021 8:18 AM
To: Scozzafava, MichaelE <Scozzafava.MichaelE@epa.gov>; Benware, Richard <Benware.Richard@epa.gov>
Subject: RE: Next Steam Briefing Materials

Richard,

I just talked to Mike. We'll leave the analysis bullet off the schedule but if they ask for something more we tell them we need two weeks and have to compress the schedule.

Mike, does Deborah want to review the schedule before we move it forward or can we send it straight to Erica?

Thanks!

-B

Brian D'Amico
Chief, Technology and Analytical Support Branch
Engineering and Analysis Division
Office of Science and Technology
U.S. Environmental Protection Agency
Washington, DC
(202) 566-1069 (Office)
Ex. 6 Personal Privacy (PP) (EPA Cell)

From: Scozzafava, MichaelE <Scozzafava.MichaelE@epa.gov>
Sent: Thursday, June 10, 2021 7:58 AM
To: Damico, Brian <Damico.Brian@epa.gov>; Benware, Richard <Benware.Richard@epa.gov>
Subject: RE: Next Steam Briefing Materials

Benware you're absolutely right..... but we work for EPA, home of the phrase "Just five more meetings and we'll have a decision."

This works as a start – it's just to get Melissa thinking about a timeline and what else she wants to see.

Perhaps we also add this:

Ex. 5 Deliberative Process (DP)

From: Damico, Brian <Damico.Brian@epa.gov>
Sent: Thursday, June 10, 2021 7:54 AM
To: Benware, Richard <Benware.Richard@epa.gov>
Cc: Scozzafava, MichaelE <Scozzafava.MichaelE@epa.gov>
Subject: Re: Next Steam Briefing Materials

Try this?

Ex. 5 Deliberative Process (DP)

-B

Brian D'Amico
Chief, Technology and Analytical Support Branch
Engineering and Analysis Division
Office of Science and Technology
U.S. Environmental Protection Agency
Washington, DC

(202) 566-1069

Ex. 6 Personal Privacy (PP)

On Jun 10, 2021, at 7:51 AM, Benware, Richard <Benware.Richard@epa.gov> wrote:

Nearly done with her edits on the two-pager.

Ex. 5 Deliberative Process (DP)

Seems to me we could do the whole thing in ONE briefing, but she suggested

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

From: Scozzafava, MichaelE <Scozzafava.MichaelE@epa.gov>

Sent: Thursday, June 10, 2021 7:16 AM

To: Nagle, Deborah <Nagle.Deborah@epa.gov>

Cc: Benware, Richard <Benware.Richard@epa.gov>; Damico, Brian <Damico.Brian@epa.gov>; Wood, Robert <Wood.Robert@epa.gov>

Subject: Re: Next Steam Briefing Materials

Thank you Deborah. We plan to add to Ex. 5 Deliberative Process (DP) We'll make these edits and get clean versions of all the materials (including the analysis memo) ready to submit today.

Sent from my iPhone

On Jun 10, 2021, at 7:00 AM, Nagle, Deborah <Nagle.Deborah@epa.gov> wrote:

See my edits are attached. Also, I think it is important to draft a

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Thanks for your continuing efforts to bring this to closure. Let me know if you have any questions on my edits.

-Deborah

From: Benware, Richard <Benware.Richard@epa.gov>

Sent: Wednesday, June 9, 2021 8:22 AM

To: Wood, Robert <Wood.Robert@epa.gov>; Nagle, Deborah <Nagle.Deborah@epa.gov>

Cc: Scozzafava, MichaelE <Scozzafava.MichaelE@epa.gov>; Damico, Brian

<Damico.Brian@epa.gov>

Subject: Next Steam Briefing Materials

Deborah/Rob,

Please find materials for Monday's briefing attached for your review.

Best,

-Richard

=====

Richard J. Benware, Steam Electric ELG Team Leader
U.S. Environmental Protection Agency, Office of Water

Email: benware.richard@epa.gov

Phone: 202.566.1369

Mailing Address:

1200 Pennsylvania Ave., NW

Mail Code 4303T

Washington, DC 20460

=====

<Steam Briefing Memo_20210609_DGN.docx>

<Agenda_DGN.docx>

Potential Revisions to the Steam Electric ELGs: **Ex. 5 AC/DP**

Driver: EPA must inform the Fourth Circuit by July 26, 2021 if it intends to revise the effluent limitations guidelines for FGD wastewater, bottom ash transport water, and/or subcategories.

Purpose of this paper: **Ex. 5 AC/DP**

Ex. 5 AC/DP

Timeline: **Ex. 5 AC/DP**

Ex. 5 AC/DP

Ex. 5 AC/DP

Steam Electric ELG Reconsideration Rule:

Analysis of Flue Gas Desulfurization (FGD) Wastewater

Purpose: The purpose of this memorandum is to ~~get a decision on whether to revise the 2020~~ Steam Electric Rule. This memorandum presents **Ex. 5 Deliberative Process (DP)**

Ex. 5 Deliberative Process (DP)

Summary: OST staff compiled relevant information on the 64 coal-fired power plants with wet FGD that existed as of the 2020 rule and **Ex. 5 Deliberative Process (DP)**

Ex. 5 Deliberative Process (DP)

BOX 1 – Pollutant Types

Non-Salt Pollutants: these are pollutants treated by chemical precipitation plus biological treatment and include toxic/priority pollutants (mercury, arsenic, lead, etc.), nutrients (nitrogen and phosphorus), and inorganic unconventional pollutants (e.g., molybdenum).

Salt Pollutants: these are pollutants present in an ionic form that cannot be treated with chemical precipitation plus biological treatment (halogens, calcium, sodium, etc).

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

¹ Note that this is also the date under 423.19(h) that facilities will have to file a notice of planned participation in the voluntary incentives program's membrane-based limits, **Ex. 5 Deliberative Process (DP)**

Ex. 5 Deliberative Process (DP)

Information Compilation

OST compiled a list of the 64 coal-fired power plants

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Analysis

Ex. 5 Deliberative Process (DP)

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Ex. 5 Deliberative Process (DP)

Message

From: Fox, Radhika [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D94B1BEEA3DE46FB85720630AAFAAD26-FOX, RADHIK]
Sent: 7/21/2021 6:33:36 PM
To: David Risley (Risley.David@epa.gov) [Risley.David@epa.gov]; Conger, Nick [Conger.Nick@epa.gov]
CC: Melissa Hoffer (Hoffer.Melissa@epa.gov) [Hoffer.Melissa@epa.gov]
Subject: 7.21.2021 - Steam Electric Comms Plan.docx
Attachments: 7.21.2021 - Steam Electric Comms Plan.docx

Hi Nick: per our conversation, here is the draft press release.

David: I spoke to Nick briefly and gave him a heads up on this. I will also see if I can set something up with Radha, Casey, Rosemary on this for tomorrow morning. Here are my edits and comments on the press release.

Melissa: as someone close to this issue, do you feel like

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

David: do you want to share this version with the OST/OGC team we are meeting with at 4?

Message

From: Patrick, Monique [Patrick.Monique@epa.gov]
Sent: 3/10/2021 3:58:44 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]
Subject: Steam Electric - ELG

Good morning Melissa,

I totally missed these attachments which are included inside of the mtg invite for 11 am (your next mtg today). I will make sure that I look at all of your mtg invites and include any of those attachments from now on.

Subject: Steam Electric - ELG
Location: Microsoft Teams Meeting

Start: Wed 3/10/2021 11:00 AM
End: Wed 3/10/2021 11:45 AM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Fox, Radhika

Required Attendees: Benita Best-Wong; Nagle, Deborah; Wood, Robert (Wood.Robert@epa.gov); Scozzafava.MichaelE@epa.gov; Huff, Lisa; Damico, Brian; Pritts, Jesse; Benware, Richard; Flanders, Phillip; Lewis, Samantha; Siddiqui, Ahmar; Hoffer, Melissa; Neugeboren, Steven; Levine, MaryEllen; Zomer, Jessica; Corona, Joel; Whitlock, Steve

Optional Attendees: Tiago, Joseph; Laija, Emerald; Weyer, Erica; Sabater, Juan

Purpose of the meeting: Provide an overview of the Effluent Limit Guidelines (ELG) Program and other potential opportunities for ELG rulemakings to inform decisions regarding the Steam Electric Reconsideration Rule (2020) and discuss options for next steps.

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LEGAL CONSIDERATIONS FOR REVIEW OF STEAM ELECTRIC EFFLUENT GUIDELINES

- I. ISSUE:** What are the legal considerations related to review of the 2020 “Steam Electric Reconsideration Rule,” identified as one of the actions that EPA will review pursuant to Executive Order 13990, “Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis, 86 Fed. Reg. 7037 (Jan. 20, 2021).
- Pursuant to direction from EPA’s Acting General Counsel, EPA received an abeyance until May 25, 2021, in the environmental group challenges to the 2020 rule pending in the Fourth Circuit.
 - Industry challenges to the 2015 steam electric rule are currently in abeyance in the Fifth Circuit pending judicial review of the 2020 rule.
- II. ENVIRONMENTAL OVERVIEW:**
- When EPA revised the steam electric effluent limitations guidelines and standards (ELGs) in 2015, it noted that the steam electric power plants contribute the greatest amount of all toxic pollutants discharged to surface waters by industrial categories regulated under the Clean Water Act. For this reason, it has been a high priority for NGO stakeholders to have these ELGs reflect the latest technological advances (see below).
 - After several decades without revisions, EPA revised the ELGs in 2015 (which was estimated to reduce pollutant discharges from the industry by 1.4 billion pounds), and it partially reconsidered and revised the ELGs again in 2020. Both rules address discharges of toxic pollutants including selenium, arsenic and mercury, as well as nutrients.
 - Neither rule limits discharges of bromides that may form carcinogenic disinfection by-products at downstream drinking water facilities, except through a voluntary program.
- III. ENVIRONMENTAL JUSTICE ASPECTS OF THE RULE:**
- EPA conducted an Environmental Justice (EJ) analysis for the 2015 and 2020 rules under Executive Order 12898.
 - For the 2015 rule, EPA explained that, due to their close proximity to these discharges and relatively high consumption of fish, some minority and low-income communities have greater exposure to, and are therefore at greater risk from, pollutants in steam electric power plant discharges. EPA found that the rule increased the level of environmental protection (reduced adverse human health and environmental effects) for all affected populations, including minority and low-income populations. Furthermore, EPA estimated that minority and low-income populations would receive, proportionately, more of the human health benefits associated with the final rule.
 - For the 2020 rule, using the 2015 rule as a baseline, EPA stated, “Overall, the various analyses showed that estimated environmental changes under the . . . [final rule] may affect

minority and/or low income populations to different degrees across environmental media, exposure pathways, and over time, but that the estimated effects (positive or negative) of the changes will be small.” One reason that EPA estimated some benefits to minority and/or low income populations under the rule was that it forecasted that some plants would choose to participate in a voluntary program with more stringent requirements (as their least-cost alternative). Environmental groups had significant comments on the EJ analysis done for this rule and overall did not believe the analysis did enough to identify and analyze impacts on EJ communities.

IV. STAKEHOLDERS:

- **Environmental groups:** Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP
- **Industry Groups:** Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP
- **Drinking Water Utilities:** Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP
- **States/Tribes:** Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

V. LITIGATION BACKGROUND AND STATUS:

2015 Rule Litigation and Reconsideration by the last Administration:

- Seven petitions for review of the 2015 rule were filed by industry, environmental group, and drinking water utility petitioners and consolidated in the Fifth Circuit Court of Appeals. *Southwestern Electric Power Co., et al. v. EPA*, Case No. 15-60821 (5th Cir.). Not all aspects of the rule were challenged (*i.e.*, fly ash transport water limits, flu gas mercury control wastewater limits, subcategories, New Source Performance Standards/Pretreatment Standards for New Sources).
- On Apr. 24, 2017, the Court granted EPA’s request to hold the case in abeyance pending EPA’s review of the 2015 rule, in light of two petitions for reconsideration submitted by the Utility Water Act Group and the Small Business Association.
- On Aug. 22, 2017, the Court granted EPA’s motion to sever and hold in abeyance aspects of the litigation relating to the parts of the 2015 rule that EPA intended to reconsider (*i.e.*, bottom ash transport water and flue gas desulfurization (FGD) wastewater for existing sources). The Court later issued a briefing schedule related to environmental group petitioners’ claims in the case, which concerned wastestreams not being reconsidered by the Agency.
- On Apr. 12, 2019, the Court issued a decision vacating and remanding the 2015 combustion residual leachate regulations as unlawful under the Clean Water Act (under *Chevron* Step 1 and Step 2) and legacy wastewater regulations as arbitrary and capricious under the Administrative Procedure Act. The court cited and gave weight to an older body of caselaw articulating a fairly rigorous standard for Best Available Technology Economically Achievable (BAT) based on the language of Clean Water Act section 301(b) and the technology-forcing statutory structure, under which a driving factor for considering economics in determining BAT is achievability – what costs can be reasonably borne by the category or subcategory. *See Southwestern Elec. Power Co. (SWEPCO) v. EPA*, 920 F.3d 999, 1006 (5th Cir. 2019) (“When pollutants are regulated under this [BAT] standard, the EPA ‘must set discharge limits that reflect the amount of pollutant that would be discharged by a point source employing the best available technology that the EPA determines to be economically feasible across the category or subcategory as a whole.’ We have held that BAT limitations must ‘be based on the performance of the single best-performing plant in an industrial field.’”) (quoting *Texas Oil & Gas Ass’n v. EPA*, 161 F.3d 923, 928 (5th Cir. 1998) and *Chem. Mfrs. Ass’n v. EPA*, 870 F.2d 177, 226 (5th Cir. 1989)).
- The final Steam Electric Reconsideration Rule was published in the Federal Register at 85 Fed. Reg. 64,650 (Oct. 13, 2020).
- On Dec. 23, 2020, environmental group-intervenors moved to dismiss industry’s 2015 rule claims. EPA opposed the motion on Jan. 11, 2021, on the grounds that the court should avoid an unnecessary resolution of the mootness issue at this time and continue to hold the case in abeyance until judicial review of the 2020 rule is complete.

- On Mar. 25, 2021, the Court denied the motion to dismiss industry’s petitions for review of the 2015 rule for lack of jurisdiction (mootness) and ordered that industry petitioners’ claims be held in abeyance pending judicial review of the 2020 rule.

2020 Rule Litigation:

- Two petitions for review were filed and consolidated in the Fourth Circuit on Nov. 19, 2020. *Appalachian Voices et al. v. EPA*, No. 20-2187 (4th Cir.). One petition was filed by Clean Water Action; Environmental Integrity Project; Sierra Club; Waterkeeper Alliance, Inc.; Natural Resources Defense Council, Inc.; Center for Biological Diversity; PennEnvironment, Inc.; Chesapeake Climate Action Network; and Prairie Rivers Network. The other petition was filed by Appalachian Voices; Good Stewards of Rockingham; Stokes County Branch of the NAACP; and Winyah Rivers Alliance.
- EPA filed a certified index to the record on Dec. 18, 2020.
- An industry trade group (UWAG) and certain energy companies (Electric Energy, Inc.; Coletto Creek Power, LLC; Dynegy Miami Fort, LLC; Dynegy Midwest Generation, LLC; Dynegy Zimmer, LLC; Illinois Power Generating Company; Illinois Power Resources Generating, LLC; and Kincaid Generation, LLC) moved to intervene in the litigation, which the court granted on Dec. 3, 2020. UWAG also filed a motion to transfer the litigation to the Fifth Circuit. Environmental groups opposed the motion and EPA took no position. The Court has not yet ruled on it.
- On Mar. 1, 2021, the Court granted EPA’s motion to hold the case in abeyance until May 25, 2021, to allow time for EPA to review the rule pursuant to E.O. 13990.

VI. OVERVIEW OF THE 2020 RULE DECISIONS, LIKELY CHALLENGES TO THE RULE, AND LEGAL RISK ASSESSMENT

To inform the Agency’s review of the 2020 rule, we review below major decisions made in the rule for the two wastestreams at issue (FGD wastewater and bottom ash) and the three subcategories established by the rule.

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

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Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP



Briefing Memo – Steam Electric Reconsideration Rule; Litigation

Printed on MM/DD/YYYY

Filed: MM/DD/YYYY X:XX AM/PM (FOR SCHEDULING) (if updated note in italics and in green font).

Attachment 2:

Additional Information on FGD Wastewater

Ex. 5 Deliberative Process (DP)



Briefing Memo – Steam Electric Reconsideration Rule; Litigation

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Filed: MM/DD/YYYY X:XX AM/PM (FOR SCHEDULING) (if updated note in italics and in green font).

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)



Briefing Memo – Steam Electric Reconsideration Rule; Litigation

Printed on MM/DD/YYYY

Filed: MM/DD/YYYY X:XX AM/PM (FOR SCHEDULING) (if updated note in italics and in green font).

Table 1: Summary of the FGD Limits in 2020 vs 2015

| Pollutant or pollutant property | Year | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Change |
|---------------------------------|------|-----------------------|--|----------------|
| Arsenic, total (ug/L) | 2015 | 11 | 8 | Negligible |
| | 2020 | 18 | 8 | |
| Mercury, total (ng/L) | 2015 | 788 | 356 | More Stringent |
| | 2020 | 103 | 34 | |
| Selenium, total (ug/L) | 2015 | 23 | 12 | Less Stringent |
| | 2020 | 70 | 29 | |
| Nitrate/nitrite as N (mg/L) | 2015 | 17.0 | 4.4 | More Stringent |
| | 2020 | 4 | 3 | |



Briefing Memo – Steam Electric Reconsideration Rule; Litigation

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Table 2: Summary of the FGD VIP Limits in 2020 vs 2015

| Pollutant or pollutant property | Year | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Change |
|---------------------------------|------|-----------------------|--|----------------|
| Arsenic, total (ug/L) | 2015 | 4 | N/A | Negligible |
| | 2020 | 5 | N/A | |
| Mercury, total (ng/L) | 2015 | 1.8 | 1.3 | Less Stringent |
| | 2020 | 23 | 10 | |
| Selenium, total (ug/L) | 2015 | 453 | 227 | More Stringent |
| | 2020 | 10 | N/A | |
| Nitrate/nitrite as N (mg/L) | 2020 | 2.0 | 1.2 | New Limit |
| Bromide (mg/L) | 2020 | 0.2 | N/A | New Limit |
| TDS (mg/L) | 2015 | 38 | 22 | Less Stringent |
| | 2020 | 306 | 149 | |



Briefing Memo – Steam Electric Reconsideration Rule; Litigation

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Filed: MM/DD/YYYY X:XX AM/PM (FOR SCHEDULING) (if updated note in italics and in green font).

Attachment 4:

Steam Electric Industry Big Picture Overview

- OST is involved in a number of actions related to the Steam Electric industrial category, including:
- 2020 Steam Electric Reconsideration Rule
 - In 2020, EPA finalized the Steam Electric Reconsideration Rule which modified the limits for two of the seven wastestreams that were updated in the 2015 rule: Flue Gas Desulphurization (FGD) wastewater and Bottom Ash (BA) transport water.
 - E.O.13990 directed the Agency to review this rule for potential reconsideration.
 - Litigation on the 2020 Rule is in abeyance until May 25th, at which time the Agency will need to inform the court whether it intends to defend the rule.
- 2015 Limits for Combustion Residual Leachate and Legacy Wastewater
 - In 2019, the Fifth Circuit vacated the 2015 Rule limitations for two wastestreams: combustion residual leachate and legacy wastewater.
 - The 2015 Rule set the limits for these wastestreams equal to the 1982 limits, which the court ruled was arbitrary and violated the Clean Water Act.
 - EPA has indicated, through the Unified Regulatory Agenda, that the Agency may conduct a rulemaking to address these wastestreams.

Ex. 5 AC/AWP/DP

- Challenge to Merrimack Station Permit
 - Region 1 issued a NPDES permit to Merrimack Station with technology-based limits applicable to combustion residual leachate wastestream.
 - The permit sets limits for leachate equal to the 1982 limits rather than allowing the limits to be set at the discretion of the permitting authority on a site-specific, Best Professional Judgment (“BPJ”) basis.
 - **Ex. 5 AC/AWP/DP**
- Efforts that build on the 2020 Steam Electric Reconsideration Rule



Briefing Memo – Steam Electric Reconsideration Rule; Litigation

Printed on MM/DD/YYYY

Filed: MM/DD/YYYY X:XX AM/PM (FOR SCHEDULING) (if updated note in italics and in green font).

- One important learning from the 2020 Rule is that membrane technology has advanced considerably and may be broadly applicable as a zero discharge treatment technology across various industrial categories.
- OST staff is meeting with technology vendors to better understand how this technology has been deployed to treat industrial wastewater.

Message

From: Zomer, Jessica [Zomer.Jessica@epa.gov]
Sent: 5/19/2021 6:51:26 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]
Subject: RE: Steam electric meeting with petitioners before 5/25

Ex. 6 Personal Privacy (PP)

We were able to reschedule for Monday at 10:30.

From: Hoffer, Melissa <Hoffer.Melissa@epa.gov>
Sent: Wednesday, May 19, 2021 2:41 PM
To: Zomer, Jessica <Zomer.Jessica@epa.gov>
Subject: Re: Steam electric meeting with petitioners before 5/25

Thanks, Jessica. I now have to travel on Friday for **Ex. 6 Personal Privacy (PP)**

Melissa

Sent from my iPhone

On May 19, 2021, at 12:33 PM, Zomer, Jessica <Zomer.Jessica@epa.gov> wrote:

Melissa,

We are working on scheduling a meeting with environmental petitioners in the steam electric reconsideration rule litigation for you and Benita, hopefully to take place before **next Tuesday, May 19**, when our current litigation abeyance expires. We thought you were free on Friday afternoon at 4:30 for such a meeting, but learned just now from Monique that you are not free at all on Friday, so we are trying to reschedule for Monday. In the meantime, we are drafting a declaration to support the need for 60 more days on the abeyance if petitioners decide to oppose our request.

We are also working with Monique to schedule a follow-up briefing for you and Benita on the information OW sent forward last week before the meeting with petitioners. I will send both the OW materials and summary notes from the last meeting between environmental petitioners and OW staff to the Front Office for inclusion in your evening binder (they're attached here as well).

Please let me know if you need anything else or would like to meet with us before the meeting with petitioners.

Jessica Hall Zomer

Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW, Mail Code 2355A, Washington, DC 20460
Tel. (202) 564-3376 | zomer.jessica@epa.gov

<Steam Follow-Up Analysis Memo 20210514.docx>
<Consolidated Applachian Voices Notes (002).docx>

Appointment

From: Google Calendar [calendar-notification@google.com]
Sent: 5/21/2021 3:27:26 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]
Subject: Accepted: Steam Electric Reconsideration Rule @ Mon May 24, 2021 8:30am - 9:30am (MDT) (Hoffer, Melissa)
Attachments: invite.ics
Location: Microsoft Teams Meeting
Start: 5/24/2021 2:30:00 PM
End: 5/24/2021 3:30:00 PM
Show Time As: Tentative

Recurrence: (none)

Casey Roberts has accepted this invitation.
Steam Electric Reconsideration Rule

When Mon May 24, 2021 8:30am – 9:30am Mountain Time - Denver

Where Microsoft Teams Meeting ([map](#))

Calendar Hoffer, Melissa

Who

- Hoffer, Melissa - organizer
- Casey Roberts - creator
- agarcia@selctn.org
- abel russ
- Best-Wong, Benita
- bharti@biologicaldiversity.org
- fholleman@selcnc.org
- hconnor@biologicaldiversity.org
- Jon Devine
- igonzalez@earthjustice.org
- Joshua Smith
- lgriffith@selcnc.org
- lperetto@earthjustice.org
- mozaeta@earthjustice.org
- Nagle, Deborah
- tcmar@earthjustice.org
- Garbow, Avi
- jpeters@cleanwater.org
- Levine, MaryEllen
- lpiette@earthjustice.org
- mkimball@selcnc.org
- Neugeboren, Steven
- Hoshijima, Tsuki (ENRD)
- Zomer, Jessica

- Gibson, Neshawne - optional
- Patrick, Monique - optional
- Shaw, Carla - optional

POC: Monique Patrick

Microsoft Teams meeting

Join on your computer or mobile app

Click here to join the meeting

Or call in (audio only)

Ex. 6 Personal Privacy (PP) United States, Washington DC

Phone Conference ID: **Ex. 6 Personal Privacy (PP)**

Find a local number | **Reset PIN**

By participating in EPA hosted virtual meetings and events, you are consenting to abide by the agency's terms of use. In addition, you acknowledge that content you post may be collected and used in support of FOIA and eDiscovery activities.

[Learn More](#) | [Meeting options](#)

Invitation from [Google Calendar](#)

You are receiving this courtesy email at the account hoffer.melissa@epa.gov because you are an attendee of this event.

To stop receiving future updates for this event, decline this event. Alternatively you can sign up for a Google account at <https://calendar.google.com/calendar/> and control your notification settings for your entire calendar.

Forwarding this invitation could allow any recipient to send a response to the organizer and be added to the guest list, or invite others regardless of their own invitation status, or to modify your RSVP. [Learn More](#).

From: Casey Roberts [casey.roberts@sierraclub.org]
To: Hoffer, Melissa [hoffer.melissa@epa.gov]; Casey Roberts [casey.roberts@sierraclub.org]
Subject: Steam Electric Reconsideration Rule
Location: Microsoft Teams Meeting
Start: 5/24/2021 2:30:00 PM
End: 5/24/2021 3:30:00 PM
Show Time As: Tentative

POC: Monique Patrick

ED 006652 00039136-00001

Message

From: Zomer, Jessica [Zomer.Jessica@epa.gov]
Sent: 6/11/2021 4:55:44 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]; OGC Immediate Office Support [OGCFrontOfficeSupportStaff@epa.gov]
CC: Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]
Subject: Binder materials for 6-14-21 1pm mtg on Steam Electric with Melissa
Attachments: Paper for 6-14-21 1pm mtg with Melissa on Steam Electric (1 of 3).pdf; Agenda for 6-14-21 1pm mtg with Melissa on Steam Electric (2 of 3).pdf; Paper for 6-14-21 1pm mtg with Melissa on Steam Electric (3 of 3).pdf

Melissa,

Attached are materials that OW prepared for the meeting scheduled for **Monday, 6/14, at 1 pm** on steam electric. The first is the paper you've already seen containing an analysis of FGD wastewater. The second is an agenda for the meeting, and the third contains some additional discussion

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Please let me know if you have any questions.

Jessica Hall Zomer

Office of General Counsel

U.S. Environmental Protection Agency

1200 Pennsylvania Avenue, NW, Mail Code 2355A, Washington, DC 20460

Tel. (202) 564-3376 | zomer.jessica@epa.gov

Steam Electric ELG Reconsideration Rule:

Analysis of Flue Gas Desulfurization (FGD) Wastewater

Purpose: The purpose of this memorandum is to ~~get a decision on whether to revise the 2020~~
Steam Electric Rule. This memorandum presents

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Summary: OST staff compiled relevant information on the 64 coal-fired power plants with wet FGD that existed as of the 2020 rule and

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

BOX 1 – Pollutant Types

Non-Salt Pollutants: these are pollutants treated by chemical precipitation plus biological treatment and include toxic/priority pollutants (mercury, arsenic, lead, etc.), nutrients (nitrogen and phosphorus), and inorganic unconventional pollutants (e.g., molybdenum).

Salt Pollutants: these are pollutants present in an ionic form that cannot be treated with chemical precipitation plus biological treatment (halogens, calcium, sodium, etc).

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

¹ Note that this is also the date under 423.19(h) that facilities will have to file a notice of planned participation in the voluntary incentives program's membrane-based limits.

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Information Compilation

OST compiled a list of the 64 coal-fired power plants

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Analysis

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

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Ex. 5 AC/AWP/DP

**For June 14, 2021 1pm Meeting w/ Melissa & Benita on Steam Electric
Steam Electric 2020 Rule Discussion
June 14, 2021**

Agenda

1. Solicit additional feedback on the analysis memo **Ex. 5 Deliberative Process (DP)**
Ex. 5 Deliberative Process (DP) for the Steam Electric Point Source Category.
2. Discuss new memo laying out the regulatory scenario where EPA implements the 2020 Steam Electric Rule.
3. Discuss timeline and next steps for a decision meeting with the Administrator. EPA must inform the Fourth Circuit by July 26, 2021 if it intends to revise the effluent limitations guidelines (flue gas desulfurization (FGD) wastewater, bottom ash transport water, and/or subcategories).

Decision Timing

- **June 24** – OW pre-brief of Administrator briefing
- **July 07** – Administrator policy decision briefing
- **July 14** – Obtain final Administrator decision
- **July 15-25** – Develop public announcement and other press materials
- **July 26** – EPA responds to the Fourth Circuit & announces decision to public

- The purpose of this briefing is to present options for responding to litigation on the 2020 Steam Electric Reconsideration Rule (2020 rule).
- Other drivers include EO 13990 and the administration's power sector priorities.
- OW is responsible for developing legally defensible Effluent Limitations Guidelines rules (ELGs) for a range of industries and did so for coal-fired power in 2015, revising it again in the 2020 rule.
- ELGs are designed to target water pollution, however, OW has been excited to have robust discussions with OLEM, OAR, OP, and OGC about how the ELG might contribute
- Finalizing an ELG is a data intensive effort and therefore a resource intensive process. At this time, we can support 2-3 concurrent ELG rulemakings with current staffing and budget, depending on the scope and timing of the rulemakings.

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)



Ex. 5 Deliberative Process (DP)

BRIEFING MEMO

June 29, 2021

MEMORANDUM FOR THE ADMINISTRATOR

FROM: Radhika Fox, OW, 202-XXX-XXXX, Fox.Radhika@epa.gov

SUBJECT: Steam Electric Reconsideration Option Selection

DATE: Tuesday June 29, 2021

TIME: 9:30 – 10:30 AM EST

I. REQUESTING OFFICE

Office of Water, Office of Science and Technology

II. TIMING

This briefing is driven by: Executive Order 13990 directing EPA to reconsider the rule, ongoing litigation currently held in abeyance until July 26, 2021, and the Agency's cross-office power sector strategy.

III. PURPOSE

To receive feedback on options for implementing or revising the 2020 Steam Electric Effluent Limit Guideline (2020 rule).

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)



IV. BACKGROUND AND HISTORY (BULLETS ARE FINE)

- In 2015 EPA finalized revision to the Steam Electric Effluent Guidelines, the first update to this rule since 1982.
 - On September 18, 2017 EPA announced it was delaying implementation of the 2015 rule and initiating a new rulemaking.
- In 2020 EPA finalized revisions to the 2015 rule.
- Differences between the 2015 rule and the 2020 rule include:
 - Changes to limits and compliance dates for Flue Gas Desulfurization (FGD) wastewater
 - Relaxed numeric limits for selenium
 - Tightened limits for nitrogen and mercury
 - Compliance date extended from 2023 to 2025
 - Changes to limits and compliance dates for FGD wastewater voluntary incentives program
 - Relaxed limits for mercury and TDS
 - Tightened limits for selenium
 - Created new limits for bromide and nitrogen
 - Compliance date extended from 2023 to 2028
 - Changes to limits and compliance dates for bottom ash transport water
 - Relaxed zero discharge limit to a case-by-case volumetric purge not to exceed 10 percent of system volume
 - Compliance date extended from 2023 to 2025
 - Created new subcategories
 - High-FGD flow plants
 - Low-utilization electric generating units (peakers)
 - Electric generating units ceasing coal combustion by 2028
- After promulgation of the 2020 rule EPA is evaluating whether revision to the existing regulation is necessary for three reasons:
 - Executive Order 13990 (the 2020 Steam Electric ELGs are listed as a rule for EPA to consider revising)



Briefing Memo – Power Plant Strategy

- Litigation on 2020 Rule has been consolidated in *Appalachian Voices et al. v. EPA*, No. 20-2187 (4th Cir.)
 - Petitions for review of the 2020 rule were filed by multiple environmental groups
 - Electric utilities and trade associations have intervened to defend the 2020 rule
 - The litigation is currently being held in abeyance until July 26
 - EPA is expected to make a decision to revise or not revise the 2020 Steam Electric ELGs ELG by this time
- Cross-office power sector strategy

Ex. 5 Deliberative Process (DP)

V. KEY ISSUES

Ex. 5 Deliberative Process (DP)

VI. REGULATORY SUMMARY (IF APPROPRIATE)

Ex. 5 Deliberative Process (DP)



Ex. 5 Deliberative Process (DP)

VII. ADDITIONAL POLICY OR TECHNICAL INFORMATION (IF APPROPRIATE)

The attached power point provides additional information.

VIII. ANTICIPATED STAKEHOLDER REACTION

Ex. 5 Deliberative Process (DP)



IX. STAKEHOLDER INVOLVEMENT

OW has had preliminary engagement with a wide range of stakeholders including: environmental petitioners, academic researchers, biological treatment and membrane filtration vendors, electric utilities, and trade associations.

X. ROLL-OUT AND COMMUNICATIONS PLAN

Upon selection of an option EPA and DOJ would respond to the courts regarding the ongoing litigation, and EPA would also have a formal rollout that would include involvement from the Office of the Administrator and from OW. The substance of the legal response and rollout activities would be dependent on the option selected

XI. NEXT STEPS/UPCOMING DEADLINES

We are seeking feedback on how to proceed with the implementation and potential revisions of the 2020 Rule. EPA and DOJ must respond to the courts by July 26, 2020 on EPA's intent to revise the 2020 rule.

Steam Electric ELGs

6/29/2021 Briefing for Administrator Regan

Purpose and Drivers of this Meeting

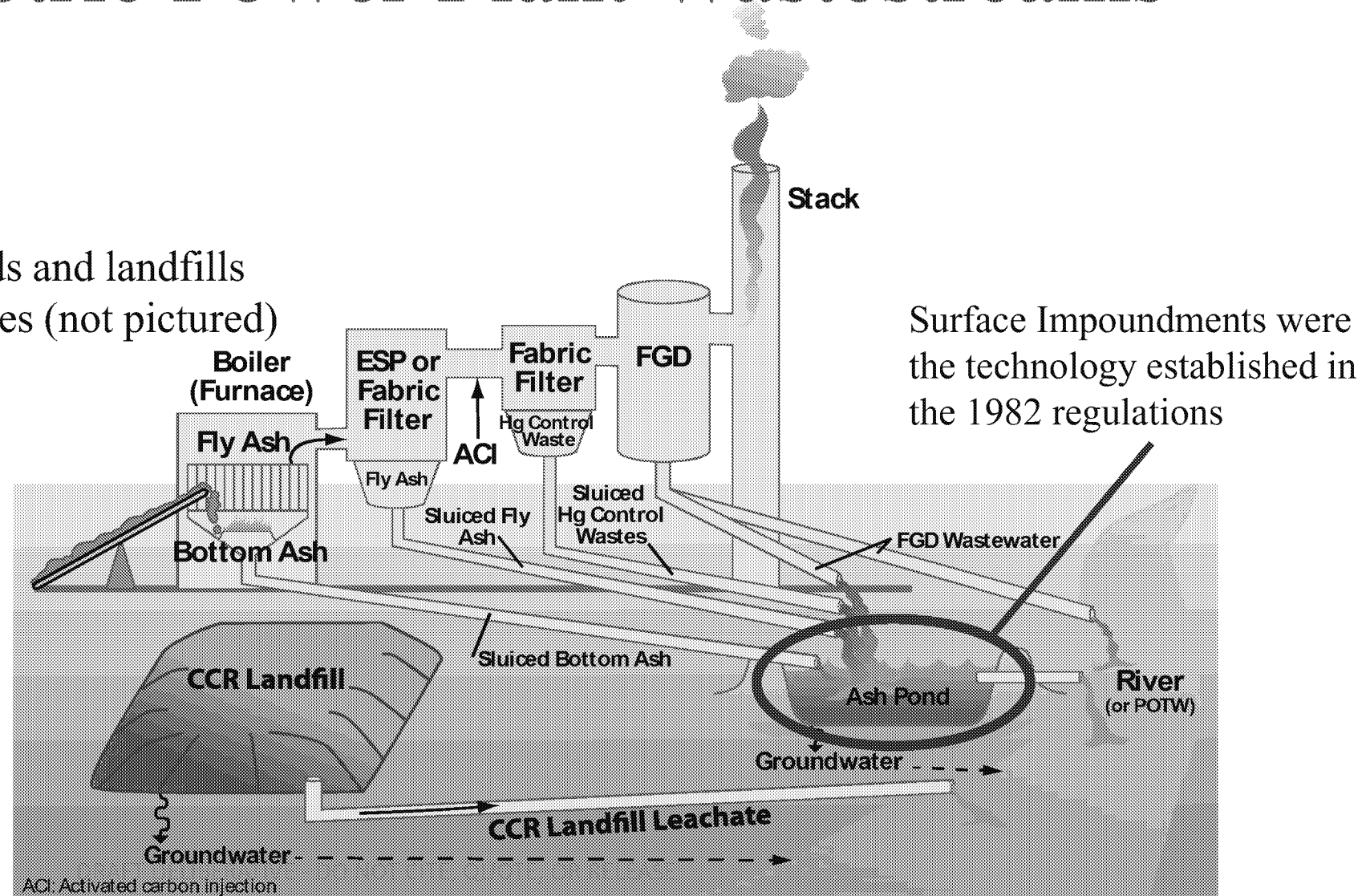
- **Purpose**: to present options for responding to litigation on the 2020 Steam Electric Reconsideration Rule (2020 rule)
- **Drivers**:
 - Litigation on 2020 Rule (*Appalachian Voices v. EPA*, 4th Cir.)
 - Current abeyance expires on July 26
 - EPA/DOJ represented that EPA expected to make a decision to revise or not revise the 2020 rule by this time
 - EO 13990
 - 2020 Steam Electric Reconsideration Rule is listed as a rule for EPA to consider revisions
 - **Ex. 5 Deliberative Process (DP)**

See Appendix A for information on the litigation

DRAFT DELIBERATIVE - DO NOT CITE, QUOTE, OR RELEASE

Steam Electric Power Plant Wastestreams

- FGD wastewater
- Fly ash transport water
- BA transport water
- Mercury (Hg) control waste
- Leachate from ash/FGD ponds and landfills
- Gasification process discharges (not pictured)



See *Appendix B* for additional history on the ELGs prior to 2020

Background: What Changed from 2015-2020

- The 2020 rule **revises the technology basis, limitations, and compliance dates** established in the 2015 rule
 - Raised some FGD wastewater limits and lowered others
 - Allowed site-specific discharges of bottom ash transport water
 - Extended compliance dates for both wastestreams by 2 years
- The 2020 rule **creates new subcategories** (point source discharges subject to differentiated treatment) with less stringent limitations
 - High FGD flow power plants
 - Low-utilization electric generating units (i.e., “peakers”); and
 - Permanent cessation of coal combustion by 2028 (i.e., retiring or converting fuels)
 - **Driving some coal plants to accelerate retirement dates to avoid incurring further treatment costs**
- **Ex. 5 Deliberative Process (DP)**

See Appendix C for further details on the specific changes made in the 2020 rule

Water Pollution Reductions: FGD Wastestream

- **2020 Rule**

-
-

Ex. 5 Deliberative Process (DP)

- **Potential New Rulemaking**

-
-

Ex. 5 Deliberative Process (DP)

See Appendix D for additional details on the numeric estimates above

DRAFT DELIBERATIVE - DO NOT CITE, QUOTE, OR RELEASE

Impacts to Environmental Justice Communities

- The 2020 rule environmental justice analysis evaluated the demographics of three separate sets of populations:
 - Individuals surrounding power plants with changing air pollution levels
 - Individuals surrounding downstream surface waters with changing water pollution levels; and
 - Individuals served by downstream drinking water treatment plants with changing water pollution levels
- What could we learn from additional analyses?

Options

Ex. 5 Deliberative Process (DP)

Draft Rulemaking Schedule

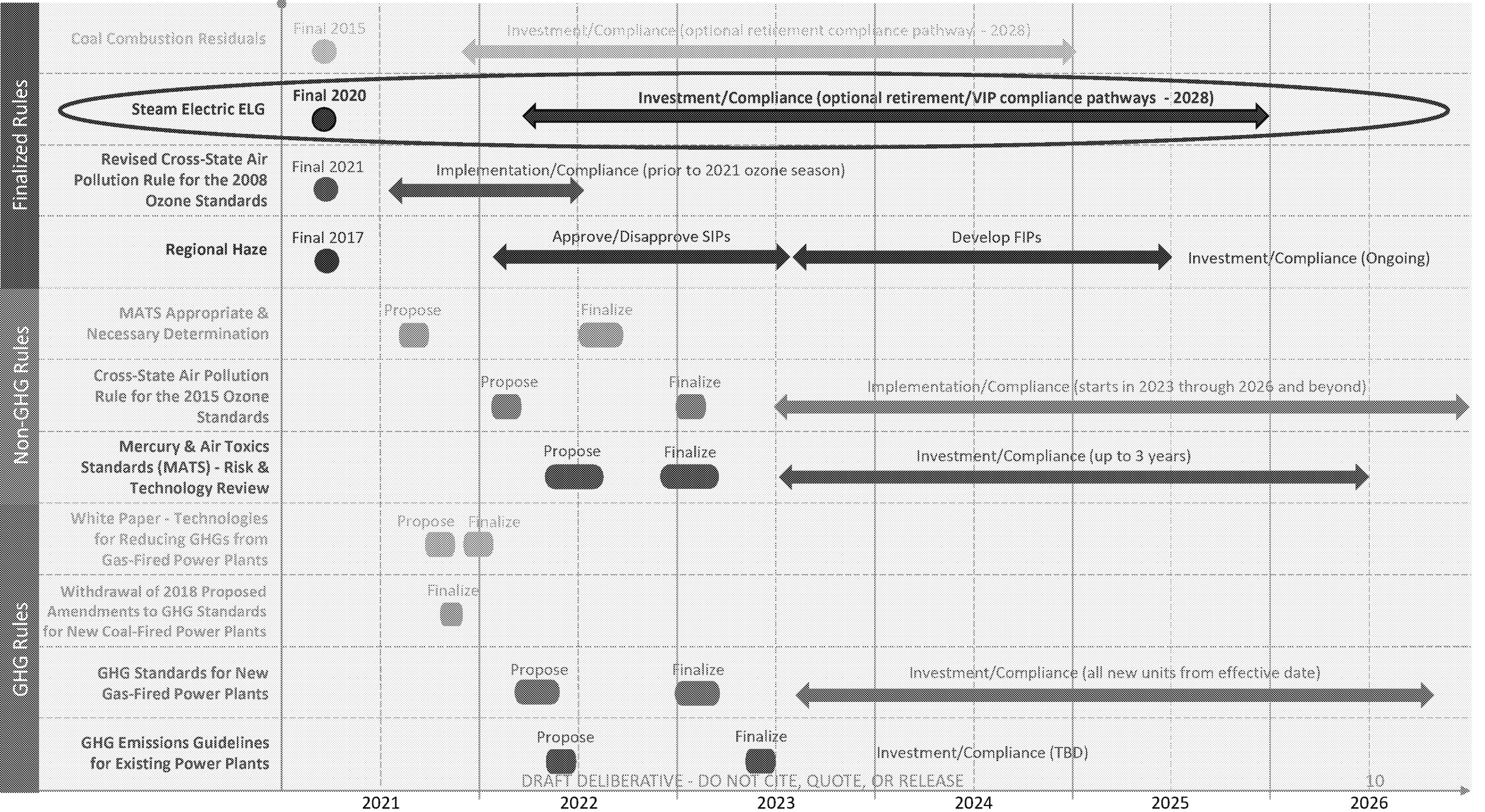
Ex. 5 Deliberative Process (DP)

Intersection with Other EPA Regulatory Actions

Ex. 5 Deliberative Process (DP)

See Appendix E for additional details

DRAFT DELIBERATIVE - DO NOT CITE, QUOTE, OR RELEASE



Timing and Next Steps

- **Timing**: Need a decision by July 14 to give OGC and DOJ sufficient time to prepare the court filings prior to when the abeyance ends on July 26.
- **Next Steps**:
 - July 15-23 – Develop public announcement and other press materials
 - July 26 – EPA responds to the Fourth Circuit & announces decision to public

Appendix A: **Current Litigation Details**

Current Litigation Details

- Two petitions for review filed by (1) Clean Water Action; Environmental Integrity Project; Sierra Club; Waterkeeper Alliance, Inc.; Natural Resources Defense Council, Inc.; Center for Biological Diversity; PennEnvironment, Inc.; Chesapeake Climate Action Network; and Prairie Rivers Network and (2) Appalachian Voices; Good Stewards of Rockingham; Stokes County Branch of the NAACP; and Winyah Rivers Alliance were consolidated in the Fourth Circuit Court of Appeals on Nov. 19, 2020. *Appalachian Voices et al. v. EPA*, No. 20-2187 (4th Cir.).
- EPA filed a certified index to the record on Dec. 18, 2020.
- An industry trade group (UWAG) and certain energy companies (Electric Energy, Inc.; Coleto Creek Power, LLC; Dynegy Miami Fort, LLC; Dynegy Midwest Generation, LLC; Dynegy Zimmer, LLC; Illinois Power Generating Company; Illinois Power Resources Generating, LLC; and Kincaid Generation, LLC) moved to intervene in the litigation, which the court granted on Dec. 3, 2020. UWAG also filed a motion to transfer the litigation to the Fifth Circuit. Environmental groups opposed the motion and EPA took no position. The Court has not yet ruled on it.

Appendix B: **Pre-2020 Rule History**

Background

- In 2015, EPA issued a final rule updating the 1982 effluent limitations guidelines and standards (ELGs) for steam electric power plants.
 - A steam electric power plant (plant) consists of one or more electric generating units (EGUs) which produce electricity primarily through the use of fossil or nuclear fuels to generate steam to turn a turbine
 - Coal-fired power plants, a subset of plants covered in the 2015 rule, generate several pollutant streams which are released into the air, water, and land
 - These coal-derived waste streams make up the majority of those regulated in the 2015 rule (see figure on next slide)
 - At the time, the 2015 rule was projected to reduce 1.4 billion lbs/year of pollutant discharges.

Background

- The 2015 rule was subject to multiple legal challenges (7 petitions for review from environmental, industry and drinking water groups) and two administrative petitions for reconsideration.
- In 2018, EPA announced it would reconsider the Steam Electric ELGs through a new rulemaking* with respect to:
 - Flue gas desulfurization (FGD) wastewater and
 - Bottom ash (BA) transport water
- The final reconsideration rule, signed on August 31, 2020, contains revised ELGs for these two waste streams.

*EPA did not reconsider limits for other wastestreams (e.g. fly ash) or new source performance standards.

Appendix C: **Further Details of the 2020 Rule Changes**

Summary of the 2020 Rule: FGD Limits

| Pollutant or pollutant property | Year | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Change |
|---------------------------------|------|-----------------------|--|----------------|
| Arsenic, total (ug/L) | 2015 | 11 | 8 | Negligible |
| | 2020 | 18 | 8 | |
| Mercury, total (ng/L) | 2015 | 788 | 356 | More Stringent |
| | 2020 | 103 | 34 | |
| Selenium, total (ug/L) | 2015 | 23 | 12 | Less Stringent |
| | 2020 | 70 | 29 | |
| Nitrate/nitrite as N (mg/L) | 2015 | 17.0 | 4.4 | More Stringent |
| | 2020 | 4 | 3 | |

Summary of the 2020 Rule: FGD Voluntary Incentive Program (VIP) Limits

| Pollutant or pollutant property | Year | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Change |
|---------------------------------|------|-----------------------|--|----------------|
| Arsenic, total (ug/L) | 2015 | 4 | N/A | Negligible |
| | 2020 | 5 | N/A | |
| Mercury, total (ng/L) | 2015 | 1.8 | 1.3 | Less Stringent |
| | 2020 | 23 | 10 | |
| Selenium, total (ug/L) | 2015 | 453 | 227 | More Stringent |
| | 2020 | 10 | N/A | |
| Nitrate/nitrite as N (mg/L) | 2020 | 2.0 | 1.2 | New Limit |
| Bromide (mg/L) | 2020 | 0.2 | N/A | New Limit |
| TDS (mg/L) | 2015 | 38 | 22 | Less Stringent |
| | 2020 | 306 | 149 | |

Summary of the Final Rules: BA Limits

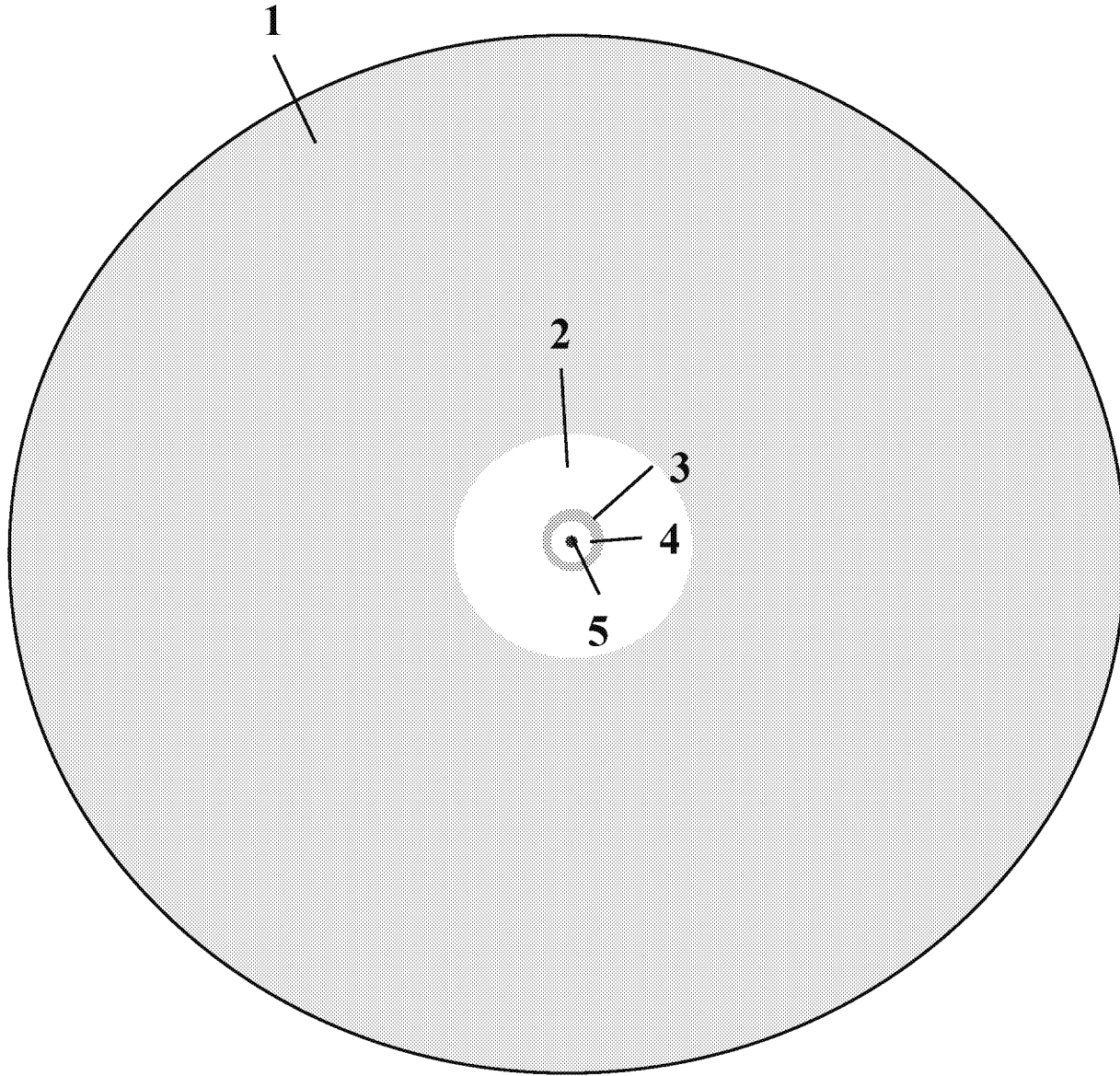
- 2015 Rule BAT/PSES:
Zero Discharge

- Compliance using dry system (does not generate BA transport water)
or
- Compliance using a wet system (must achieve 100% recycle)

- 2020 Rule BAT/PSES:
Site-Specific Purge

- May still comply using a dry system that does not generate BA transport water
or
- If compliance is using a wet system, may request a site-specific purge determination from the permitting authority

Summary of the 2020 Rule: BA Limits



- 1) **Current Discharges**: 100% of surface impoundment (SI) influent
- 2) **Rolling 30-Day Average Cap**: 10% of primary active wetted system volume (includes volumes of primary tanks, pipes, etc. but no SI volume) §423.11(aa)-(bb) and §423.13(k)(2)(i)(B) or §423.16(g)(2)(i)(B)
- 3) **Must Be Allowable Purges**: four allowable purges *See* §423.13(k)(2)(i)(A)(1)-(4) or §423.16(g)(2)(i)(A)(1)-(4)
- 4) **Must Be Necessary Purges**: “cannot be managed within the system” §423.19(c)(3)(G)
- 5) **Further Purge Treatment**: permitting authorities establish limits using Best Professional Judgement (BPJ) §423.11(cc) 21

Summary of the 2020 Rule: Subcategories

- EPA created three new subcategories which were all given less stringent limitations
- These new subcategories were not estimated to impact a large portion of the steam electric industry (estimated counts below)

| Grouping or Subcategory | # of Plants* | # of EGUs |
|--|-----------------|------------|
| All Coal-Fired Steam Electric | 218 | 427 |
| → Subset with FGD Wastewater Discharges ¹ | 56 | 135 |
| → Subset with BA Transport Water Discharges ¹ | 94 | 214 |
| High FGD Flow Subcategory | 1 | 2 |
| Low Utilization EGUs Subcategory | 4 ² | 6 |
| Permanent Cessation of Coal Combustion EGUs Subcategory | 12 ² | 23 |

¹ Plants and EGUs with FGD and BA discharges overlap, and the 2020 rule only impacts 108 plants total

² Since the low utilization and ceasing combustion of coal subcategories impact individual EGUs, not all EGUs at a plant qualify

Summary of the 2020 Rule: Subcategories

- High FGD Flow Plants (FGD Wastewater ONLY)
 - Plant does not have to meet selenium or nitrogen limits (technology basis is chemical precipitation, only)
 - EPA data indicate that only one plant (TVA Cumberland) qualifies for this subcategory

| Pollutant or pollutant property | Year | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Change |
|---------------------------------|------|-----------------------|--|---------------|
| Arsenic, total (ug/L) | 2015 | 11 | 8 | None |
| | 2020 | 11 | 8 | |
| Mercury, total (ng/L) | 2015 | 788 | 356 | None |
| | 2020 | 788 | 356 | |
| Selenium, total (ug/L) | 2015 | 23 | 12 | Limit Removed |
| Nitrate/nitrite as N (mg/L) | 2015 | 17.0 | 4.4 | Limit Removed |

Summary of the 2020 Rule: Subcategories

- Low utilization EGUs (FGD Wastewater)
 - Like limitations for high FGD flow plants, the plant does not have to meet limitations for selenium and nitrogen
 - FGD systems are designed for an entire plant, so plants with both high and low utilization EGUs (if any) are likely to meet the standard limitations even for any low utilization EGUs

| Pollutant or pollutant property | Year | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Change |
|---------------------------------|------|-----------------------|--|---------------|
| Arsenic, total (ug/L) | 2015 | 11 | 8 | None |
| | 2020 | 11 | 8 | |
| Mercury, total (ng/L) | 2015 | 788 | 356 | None |
| | 2020 | 788 | 356 | |
| Selenium, total (ug/L) | 2015 | 23 | 12 | Limit Removed |
| Nitrate/nitrite as N (mg/L) | 2015 | 17.0 | 4.4 | Limit Removed |

Summary of the 2020 Rule: Subcategories

- Low utilization EGUs (BA Transport Water)
 - Unlike limitations for non-subcategorized EGUs, BAT limitations for this subcategory are set equal to BPT limitations (based on surface impoundments)
 - In addition, facilities must develop and implement a best management practices (BMP) plan which maximizes wastewater recycling to the extent feasible
 - The BMP plan does not require purges to be below 10%; however, where a low utilization EGU has an existing high recycle rate system the BMP plan will effectively limit purges to the same range as the rest of the industry.

Summary of the Final Rule: Subcategories

- EGU's Permanently Ceasing Coal Combustion (FGD Wastewater)
 - Unlike the rest of the industry or subcategories, BAT limitations for this subcategory are permanently set equal to BPT and therefore do not regulate mercury, arsenic, selenium, or nitrate/nitrite
 - Three of five plants with EGU's qualifying for this subcategory and discharging FGD wastewater already operate advanced FGD wastewater treatment systems (all three operate chemical precipitation while one also operates biological treatment)

| Pollutant or pollutant property | Year | Maximum for any 1 day | Average of daily values for 30 consecutive days shall not exceed | Change |
|---------------------------------|------|-----------------------|--|---------------|
| Arsenic, total (ug/L) | 2015 | 11 | 8 | Limit Removed |
| Mercury, total (ng/L) | 2015 | 788 | 356 | Limit Removed |
| Selenium, total (ug/L) | 2015 | 23 | 12 | Limit Removed |
| Nitrate/nitrite as N (mg/L) | 2015 | 17.0 | 4.4 | Limit Removed |

Summary of the 2020 Rule: Subcategories

- EGUs permanently ceasing combustion of coal by 2028 (BA Transport Water)
 - Like the previous subcategory, BAT limitations for this subcategory are set equal to BPT limitations
 - Unlike the previous subcategory, no BMP plan is required for this subcategory
 - Four of nine plants with EGUs that EPA projects qualify for this subcategory and discharge BA transport water already operate high recycle rate systems

Summary of the 2020 Rule: Timing

- Compliance deadline is “as soon as possible” and “no later than” dates specified in the final rule.
 - Earliest date: October 13, 2021
 - No later than date: Wastestream/subcategory dependent (see next slide)
- Permitting authorities must consider the following site-relevant factors:^{1, 2}
 - Time necessary to expeditiously plan, design, procure, and install equipment
 - Changes being made or planned in response to other EPA air and waste regulations (e.g., CCR Part A final rule)
 - An initial commissioning period for FGD wastewater
 - Other factors as appropriate

¹ The 2020 rule does not revise the specified factors that the NPDES permitting authority must consider in determining the as soon as possible date under the 2015 rule. *See* §423.11(t).

² Applicability date for VIP limitations are not determined through application of §423.11(t) but is instead simply December 31, 2028.

Summary of the Final Rule: Timing

- For Pretreatment Standards for Existing Sources (PSES), no later than October 13, 2023.
- For direct discharges, no later than:

| Limits | FGD Wastewater | BA Transport Water |
|-------------------------------------|------------------------|---|
| Generally Applicable Limitations | December 31, 2025 | December 31, 2025 |
| High Flow Subcategory | December 31, 2023 | N/A |
| Low utilization Subcategory | December 31, 2023 | Discharge limits are immediately applicable; BMP plans must be completed by December 31, 2023 |
| Ceasing coal combustion Subcategory | Immediately Applicable | Immediately Applicable |
| VIP | December 31, 2028 | N/A |

Note: The 2015 rule “no later than” dates for all wastewaters was November 1, 2018 for indirect dischargers and December 31, 2023 for direct dischargers

Appendix D: **FGD Wastewater Analysis**

FGD Wastewater Analysis

Ex. 5 Deliberative Process (DP)

FGD Wastewater Analysis: Analytical Steps

Ex. 5 Deliberative Process (DP)

Non-Salt Pollutants: these are pollutants treated by chemical precipitation plus biological treatment and include toxic/priority pollutants (mercury, arsenic, lead, etc.), nutrients (nitrogen and phosphorus), and inorganic unconventional pollutants (e.g., molybdenum).

Salt Pollutants: these are pollutants present in an ionic form that cannot be treated with chemical precipitation plus biological treatment (halogens, calcium, sodium, etc).

FGD Wastewater Analysis: Results

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

FGD Wastewater Analysis: Results

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Appendix E: **Further Details on Regulatory Overlap**

Ex. 5 Deliberative Process (DP)

Message

From: Levine, MaryEllen [levine.maryellen@epa.gov]
Sent: 7/14/2021 11:43:12 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]
CC: Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Zomer, Jessica [Zomer.Jessica@epa.gov]
Subject: RE: Steam Electric ELG-- **Ex. 5 AC/AWP/DP**
Attachments: steam bullets 7 14 21 .docx

Here you go. We understand Richard Benware, ELG Project Lead, may be at the WH meeting and he knows the details about **Ex. 5 AC/AWP/DP**

- *Mary Ellen*

Mary Ellen Levine
Assistant General Counsel for Technology & Wet Weather
Water Law Office, Office of General Counsel, U.S. EPA
202 564-1345

From: Hoffer, Melissa <Hoffer.Melissa@epa.gov>
Sent: Wednesday, July 14, 2021 7:18 PM
To: Levine, MaryEllen <levine.maryellen@epa.gov>
Subject: RE: Steam Electric ELG-- **Ex. 5 AC/AWP/DP**

No problem and thanks.

From: Levine, MaryEllen <levine.maryellen@epa.gov>
Sent: Wednesday, July 14, 2021 6:56 PM
To: Hoffer, Melissa <Hoffer.Melissa@epa.gov>; Neugeboren, Steven <Neugeboren.Steven@epa.gov>
Subject: RE: Steam Electric ELG-- **Ex. 5 AC/AWP/DP**

Will send at 7:30 pm – want to give Steve and J an opportunity to review.

- *Mary Ellen*

Mary Ellen Levine
Assistant General Counsel for Technology & Wet Weather
Water Law Office, Office of General Counsel, U.S. EPA
202 564-1345

From: Hoffer, Melissa <Hoffer.Melissa@epa.gov>
Sent: Wednesday, July 14, 2021 5:33 PM
To: Neugeboren, Steven <Neugeboren.Steven@epa.gov>; Levine, MaryEllen <levine.maryellen@epa.gov>
Subject: FW: Steam Electric ELG--Timelines for Supp Membrane Rule
Importance: High

FYI.

Mary Ellen—would you please send me a few bullets capturing the thoughts you shared this afternoon

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Thank you.

M

From: Hoffer, Melissa

Sent: Wednesday, July 14, 2021 5:31 PM

To: Fox, Radhika <Fox.Radhika@epa.gov>

Subject: Steam Electric ELG- Ex. 5 AC/AWP/DP

Importance: High

Hi Radhika,

Thinking about tomorrow's WH meeting and the focus on timing, where is OW on timing for a final supplemental EGU ELG rule?

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Was so good to see you live and in person yesterday—hope we can get together for lunch soon.

M

Melissa A. Hoffer

Acting General Counsel

Principal Deputy General Counsel

U.S. Environmental Protection Agency

Office of General Counsel

1200 Pennsylvania Avenue, NW

Washington, DC 20460

T: 202.440.1671

E: hoffer.melissa@@epa.gov

Message

From: Zomer, Jessica [Zomer.Jessica@epa.gov]
Sent: 7/21/2021 6:40:03 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]
CC: Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]
Subject: Steam electric - draft communications materials
Attachments: 7.21.2021 - Steam Electric Comms Plan REDLINE.docx; 7.21.2021 - Steam Electric Comms Plan.docx

Melissa,

FYI – Here are the draft communications materials related to the steam electric rule that OW put together and sent up to Radhika.

Jessica

From: Risley, David <Risley.David@epa.gov>
Sent: Wednesday, July 21, 2021 2:08 PM
To: Nagle, Deborah <Nagle.Deborah@epa.gov>; Zomer, Jessica <Zomer.Jessica@epa.gov>; Scozzafava, MichaelE <Scozzafava.MichaelE@epa.gov>; Neugeboren, Steven <Neugeboren.Steven@epa.gov>
Cc: Wood, Robert <Wood.Robert@epa.gov>; Levine, MaryEllen <levine.maryellen@epa.gov>; Lalley, Cara <Lalley.Cara@epa.gov>
Subject: RE: steam - discussion with plaintiffs

Hi all,

Wanted to let you know I made a few additional edits to the comms plan and notifications and re-shared with Radhika for her review. Note that I took out the answers to the Q&As just because I haven't had a chance to review them yet. Looking forward to talking at 4:00.

David Risley
Office of Water Communications, Director
Risley.David@epa.gov
Office: 202-343-9177
Cell: Ex. 6 Personal Privacy (PP)

From: Nagle, Deborah <Nagle.Deborah@epa.gov>
Sent: Tuesday, July 20, 2021 6:16 PM
To: Zomer, Jessica <Zomer.Jessica@epa.gov>; Scozzafava, MichaelE <Scozzafava.MichaelE@epa.gov>; Neugeboren, Steven <Neugeboren.Steven@epa.gov>
Cc: Wood, Robert <Wood.Robert@epa.gov>; Risley, David <Risley.David@epa.gov>; Levine, MaryEllen <levine.maryellen@epa.gov>
Subject: RE: steam - discussion with plaintiffs

Thanks Jessica – I will plan on sending these Docs to Radhika tomorrow morning after 10:00 am if that helps you manage your time.

-Deborah

From: Zomer, Jessica <Zomer.Jessica@epa.gov>
Sent: Tuesday, July 20, 2021 5:54 PM
To: Nagle, Deborah <Nagle.Deborah@epa.gov>; Scozzafava, MichaelE <Scozzafava.MichaelE@epa.gov>; Neugeboren, Steven <Neugeboren.Steven@epa.gov>

Cc: Wood, Robert <Wood.Robert@epa.gov>; Risley, David <Risley.David@epa.gov>; Levine, MaryEllen <levine.maryellen@epa.gov>

Subject: RE: steam - discussion with plaintiffs

I won't be able to turn to this until this evening – likely around 9pm. I will let you know when I'm done.

From: Nagle, Deborah <Nagle.Deborah@epa.gov>

Sent: Tuesday, July 20, 2021 5:37 PM

To: Zomer, Jessica <Zomer.Jessica@epa.gov>; Scozzafava, MichaelE <Scozzafava.MichaelE@epa.gov>; Neugeboren, Steven <Neugeboren.Steven@epa.gov>

Cc: Wood, Robert <Wood.Robert@epa.gov>; Risley, David <Risley.David@epa.gov>; Levine, MaryEllen <levine.maryellen@epa.gov>

Subject: RE: steam - discussion with plaintiffs

I have completed my review and have a few comments/edits.

Jessica – when do you think we will have a draft that I can send to Radhika?

Thanks
Deborah

From: Zomer, Jessica <Zomer.Jessica@epa.gov>

Sent: Tuesday, July 20, 2021 4:07 PM

To: Scozzafava, MichaelE <Scozzafava.MichaelE@epa.gov>; Neugeboren, Steven <Neugeboren.Steven@epa.gov>; Nagle, Deborah <Nagle.Deborah@epa.gov>

Cc: Wood, Robert <Wood.Robert@epa.gov>; Risley, David <Risley.David@epa.gov>; Levine, MaryEllen <levine.maryellen@epa.gov>

Subject: RE: steam - discussion with plaintiffs

Here is the link to the sharepoint version of the declaration. It's easier to have edits made there for version control purposes. Thanks!

From: Scozzafava, MichaelE <Scozzafava.MichaelE@epa.gov>

Sent: Tuesday, July 20, 2021 4:05 PM

To: Neugeboren, Steven <Neugeboren.Steven@epa.gov>; Nagle, Deborah <Nagle.Deborah@epa.gov>

Cc: Wood, Robert <Wood.Robert@epa.gov>; Risley, David <Risley.David@epa.gov>; Zomer, Jessica <Zomer.Jessica@epa.gov>; Levine, MaryEllen <levine.maryellen@epa.gov>

Subject: RE: steam - discussion with plaintiffs

Re-sending you the file Deborah with Steve's comments.

From: Neugeboren, Steven <Neugeboren.Steven@epa.gov>

Sent: Tuesday, July 20, 2021 4:02 PM

To: Nagle, Deborah <Nagle.Deborah@epa.gov>

Cc: Wood, Robert <Wood.Robert@epa.gov>; Scozzafava, MichaelE <Scozzafava.MichaelE@epa.gov>; Risley, David <Risley.David@epa.gov>; Zomer, Jessica <Zomer.Jessica@epa.gov>; Levine, MaryEllen <levine.maryellen@epa.gov>

Subject: RE: steam - discussion with plaintiffs

Dropping Radhika – Deborah, per my email on the declaration, I'd recommend a look at the comments on the declaration as you consider revisions to the FRN, as they are more fulsome than the ones I made on the FRN, intended to reflect what I was hearing from Radhika. Thanks

Steven Neugeboren
Associate General Counsel for Water
United States Environmental Protection Agency
Mailcode 2355A
1200 Penn. Ave., N.W.
Washington DC 20460
(202) 564-5488

From: Nagle, Deborah <Nagle.Deborah@epa.gov>
Sent: Tuesday, July 20, 2021 3:57 PM
To: Fox, Radhika <Fox.Radhika@epa.gov>
Cc: Wood, Robert <Wood.Robert@epa.gov>; Scozzafava, MichaelE <Scozzafava.MichaelE@epa.gov>; Best-Wong, Benita <Best-Wong.Benita@epa.gov>; Risley, David <Risley.David@epa.gov>; Cisar, Elizabeth <Cisar.Elizabeth@epa.gov>; Neugeboren, Steven <Neugeboren.Steven@epa.gov>; Hoffer, Melissa <Hoffer.Melissa@epa.gov>; Risley, David <Risley.David@epa.gov>
Subject: RE: steam - discussion with plaintiffs

Radhika,

We just sent our edits on the press release to David Risley. David will send you the draft press release today once he is satisfied with the draft.

Ex. 5 Deliberative Process (DP)

-Deborah

From: Fox, Radhika <Fox.Radhika@epa.gov>
Sent: Tuesday, July 20, 2021 2:25 PM
To: Nagle, Deborah <Nagle.Deborah@epa.gov>
Cc: Wood, Robert <Wood.Robert@epa.gov>; Scozzafava, MichaelE <Scozzafava.MichaelE@epa.gov>; Best-Wong, Benita <Best-Wong.Benita@epa.gov>; Risley, David <Risley.David@epa.gov>; Cisar, Elizabeth <Cisar.Elizabeth@epa.gov>; Neugeboren, Steven <Neugeboren.Steven@epa.gov>; Hoffer, Melissa <Hoffer.Melissa@epa.gov>
Subject: RE: steam - discussion with plaintiffs

Thanks Deborah – how about you share the press release with me this evening so I can share it with Lindsay and a few others in the OA. And give you my reactions early.

Ex. 5 Deliberative Process (DP)

From: Nagle, Deborah <Nagle.Deborah@epa.gov>
Sent: Tuesday, July 20, 2021 1:16 PM
To: Fox, Radhika <Fox.Radhika@epa.gov>
Cc: Wood, Robert <Wood.Robert@epa.gov>; Scozzafava, MichaelE <Scozzafava.MichaelE@epa.gov>; Best-Wong, Benita

<Best-Wong.Benita@epa.gov>; Risley, David <Risley.David@epa.gov>; Cisar, Elizabeth <Cisar.Elizabeth@epa.gov>;
Neugeboren, Steven <Neugeboren.Steven@epa.gov>
Subject: RE: steam - discussion with plaintiffs

Radhika,

On the Press Release --- My team has been working with David Risley on the comms roll out. I will have a draft this afternoon for my review.

On the FRN – I will have draft for review today as well. We are checking with OP to see how fast a short (4 page) FRN can be published once the FR office has our FRN. One thing I suggest we talk about at tomorrow's Steam meeting is

Ex. 5 Deliberative Process (DP)

-Deborah

From: Fox, Radhika <Fox.Radhika@epa.gov>
Sent: Tuesday, July 20, 2021 6:39 AM
To: Neugeboren, Steven <Neugeboren.Steven@epa.gov>
Cc: Hoffer, Melissa <Hoffer.Melissa@epa.gov>; Nagle, Deborah <Nagle.Deborah@epa.gov>; Wood, Robert <Wood.Robert@epa.gov>; Scozzafava, MichaelE <Scozzafava.MichaelE@epa.gov>; Best-Wong, Benita <Best-Wong.Benita@epa.gov>; Zomer, Jessica <Zomer.Jessica@epa.gov>; Levine, MaryEllen <levine.maryellen@epa.gov>; Risley, David <Risley.David@epa.gov>; Cisar, Elizabeth <Cisar.Elizabeth@epa.gov>
Subject: Re: steam - discussion with plaintiffs

Thanks for update Steve. I will give you a call

Deborah: does your team have a press release and comms plan drafted? I would need to see it today and we also need to engage Lindsay Hamilton given the attention this will garner. Also Deborah how quickly can your team put together the FRN? It may work if we can have the FRN come the same week if we can't get more time

On Jul 19, 2021, at 6:10 PM, Neugeboren, Steven <Neugeboren.Steven@epa.gov> wrote:

Radhika, Melissa et al – DOJ had planned to inform petitioners on a call at 5 pm today of our decision to undertake rulemaking to revise the 2020 rule since next Monday the abeyance expires and as previously discussed we got the current extension based on the representation that we would have a decision by then.

Ex. 5 AC/AWP/DP

In order to give time for further discussions with the both of you, I requested that DOJ defer the call with the plaintiffs, and it is now scheduled for Wednesday afternoon.

So we will be meeting with each of you tomorrow and Wednesday and can discuss further, but I think

Ex. 5 AC/AWP/DP

Ex. 5 AC/AWP/DP

Jessica is working on that and will coordinate with OST.

We will met with you as scheduled but please feel free to call me if you'd like to discuss.

Steven Neugeboren
Associate General Counsel for Water
United States Environmental Protection Agency
Mailcode 2355A
1200 Penn. Ave., N.W.
Washington DC 20460
(202) 564-5488

Message

From: Conger, Nick [Conger.Nick@epa.gov]
Sent: 7/22/2021 3:23:32 PM
To: Zomer, Jessica [Zomer.Jessica@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]
CC: Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Risley, David [Risley.David@epa.gov]
Subject: RE: 7.21.2021 - Steam Electric Comms Plan v2.docx
Attachments: 7.22.2021 - Steam Electric Comms Plan NC.docx

Thanks Jessica. I have made a few edits on top of yours in the attached. This is the latest version (+ David so we're working off the latest draft). I think your changes make sense, but I added a clause at the end of one sentence for your consideration. Also beefed up Admin's quote to hammer the message that we're doing this to ensure protections are in place now.

Nick Conger
Press Secretary
Environmental Protection Agency
Ex. 6 Personal Privacy (PP) mobile)

From: Zomer, Jessica <Zomer.Jessica@epa.gov>
Sent: Thursday, July 22, 2021 10:44 AM
To: Hoffer, Melissa <Hoffer.Melissa@epa.gov>; Levine, MaryEllen <levine.maryellen@epa.gov>
Cc: Conger, Nick <Conger.Nick@epa.gov>; Neugeboren, Steven <Neugeboren.Steven@epa.gov>
Subject: RE: 7.21.2021 - Steam Electric Comms Plan v2.docx

I tried to rework the paragraph that Melissa flagged to be clearer on what is in effect. What do others think?

Jessica

From: Hoffer, Melissa <Hoffer.Melissa@epa.gov>
Sent: Thursday, July 22, 2021 9:53 AM
To: Zomer, Jessica <Zomer.Jessica@epa.gov>; Levine, MaryEllen <levine.maryellen@epa.gov>
Cc: Conger, Nick <Conger.Nick@epa.gov>; Neugeboren, Steven <Neugeboren.Steven@epa.gov>
Subject: 7.21.2021 - Steam Electric Comms Plan v2.docx

Jessica / Mary Ellen,

I think this looks very good—flagging a section where I think we need to clarify what currently is in effect + what will remain in effect during the pendency of our review.

M

Message

From: Zomer, Jessica [Zomer.Jessica@epa.gov]
Sent: 7/22/2021 8:20:24 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]
CC: Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]
Subject: Re: For review - Steam Electric - Draft Motion for Abeyance

Works for me; I'll incorporate that edit into the declaration and let DOJ know about the draft motion. Thanks for your quick review!

On Jul 22, 2021, at 4:12 PM, Hoffer, Melissa <Hoffer.Melissa@epa.gov> wrote:

J—the drafts look very good.

One edit for your consideration, Dec at para. 11—I might say “**Ex. 5 Deliberative Process (DP)**”]

Ex. 5 Deliberative Process (DP)

Thank you.

M

Sent from my iPhone

On Jul 22, 2021, at 11:01 AM, Zomer, Jessica <Zomer.Jessica@epa.gov> wrote:

Melissa/Steve,

In the interest of time, I'm sending this 5-page draft motion for abeyance to you both for review simultaneously. Mary Ellen and I have reviewed and made some edits to DOJ's draft, which you will see in red-line. I am also including the most up to date version of the declaration to aid your review.

We still have not heard back from petitioners but I will let you know when we do.

Thanks,

Jessica Hall Zomer

Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW, Mail Code 2355A, Washington, DC 20460
Tel. (202) 564-3376 | zomer.jessica@epa.gov

<ENV_DEFENSE-#966796-v1-Steam_motion_for_long-term_abeyance_pending_reconsideration_jhz.docx>

<Draft Steam Declaration 7.19.21.docx>

Message

From: Zomer, Jessica [Zomer.Jessica@epa.gov]
Sent: 8/3/2021 11:29:44 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]
CC: Levine, MaryEllen [levine.maryellen@epa.gov]
Subject: Re: Follow up

I have no amendments, Melissa, this all looks right to me.

On Aug 3, 2021, at 6:03 PM, Hoffer, Melissa <Hoffer.Melissa@epa.gov> wrote:

Jessica—here is my understanding based on our conversation. Let me know if any of this is not accurate. Thanks.

For reference, here is what we said in the Comms TPs:

“The 2020 rule is only one part of the regulatory picture. The 2020 rule made modifications to only certain aspects of the 2015 Steam Electric Effluent Limitation Guidelines rule such that the current requirements are based on these two relatively recent rulemakings. And the current requirements are much better than the outdated 1982 regulations that would otherwise be in effect.”

This is accurate insofar as the 2020 and 2015 rules together are more protective than the pre-existing 1982 framework. However, the statement has been interpreted to mean

Ex. 5 AC/DP

Ex. 5 AC/DP

Ex. 5 AC/DP

Ex. 5 AC/DP

Melissa A. Hoffer
Acting General Counsel
Principal Deputy General Counsel
U.S. Environmental Protection Agency
Office of General Counsel
1200 Pennsylvania Avenue, NW
Washington, DC 20460
T: 202.440.1671
E: hoffer.melissa@@epa.gov

Appointment

From: Penman, Crystal [Penman.Crystal@epa.gov]
Sent: 3/4/2021 7:33:00 PM
To: Goodin, John [Goodin.John@epa.gov]; Nagle, Deborah [Nagle.Deborah@epa.gov]; Wood, Robert [Wood.Robert@epa.gov]; Scozzafava, MichaelE [Scozzafava.MichaelE@epa.gov]; Huff, Lisa [Huff.Lisa@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; Pritts, Jesse [Pritts.Jesse@epa.gov]; Benware, Richard [Benware.Richard@epa.gov]; Flanders, Phillip [Flanders.Phillip@epa.gov]; Lewis, Samantha [Lewis.Samantha@epa.gov]; Siddiqui, Ahmar [Siddiqui.Ahmar@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]; Zomer, Jessica [Zomer.Jessica@epa.gov]; Corona, Joel [Corona.Joel@epa.gov]; whitmer.steve@epa.gov
CC: Weyer, Erica [weyer.eric@epa.gov]
Subject: Steam Electric - ELG
Location: Microsoft Teams Meeting
Start: 3/10/2021 4:00:00 PM
End: 3/10/2021 4:45:00 PM
Show Time As: Tentative

Required Attendees: Benita Best-Wong; Goodin, John; Nagle, Deborah; Wood, Robert (Wood.Robert@epa.gov); Scozzafava.MichaelE@epa.gov; Huff, Lisa; Damico, Brian; Pritts, Jesse; Benware, Richard; Flanders, Phillip; Lewis, Samantha; Siddiqui, Ahmar; Hoffer, Melissa; Neugeboren, Steven; Levine, MaryEllen; Zomer, Jessica; Corona, Joel; whitmer.steve@epa.gov
Optional Attendees: Tiago, Joseph; Laija, Emerald; Weyer, Erica; Sabater, Juan

Purpose of the meeting: Provide an overview of the Effluent Limit Guidelines (ELG) Program and other potential opportunities for ELG rulemakings to inform decisions regarding the Steam Electric Reconsideration Rule (2020) and discuss options for next steps.

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Appointment

From: Reed, Kristen [Reed.Kristen@epa.gov]
Sent: 4/26/2021 1:49:42 PM
To: Nagle, Deborah [Nagle.Deborah@epa.gov]; Wood, Robert [Wood.Robert@epa.gov]; Scozzafava, MichaelE [Scozzafava.MichaelE@epa.gov]; Huff, Lisa [Huff.Lisa@epa.gov]; Benware, Richard [Benware.Richard@epa.gov]; Covington, James [Covington.James@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]; Zomer, Jessica [Zomer.Jessica@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Flanders, Phillip [Flanders.Phillip@epa.gov]; Allen, Ashley [Allen.Ashley@epa.gov]; Weyer, Erica [weyer.eric@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]
CC: Reed, Kristen [Reed.Kristen@epa.gov]
Subject: Steam Electric ELG
Attachments: Administrator Briefing Memo Steam 15APR2021 clean.docx; Administrator Briefing Memo Steam 14APR2021 Attach4.docx; Administrator Briefing Memo Steam 09APR2021 Attach1.docx; Administrator Briefing Memo Steam 08APR2021 Attach3.docx; Administrator Briefing Memo Steam 09APR2021 Attach2.docx; Legacy and Leachate Paper.docx
Location: Microsoft Teams Meeting
Start: 4/27/2021 1:00:00 PM
End: 4/27/2021 2:00:00 PM
Show Time As: Tentative

Required Attendees: Nagle, Deborah; Wood, Robert; Scozzafava, MichaelE; Huff, Lisa; Benware, Richard; Covington, James; Levine, MaryEllen; Zomer, Jessica; Neugeboren, Steven; Flanders, Phillip; Allen, Ashley; Weyer, Erica; Damico, Brian; Hoffer, Melissa
Optional Attendees: Reed, Kristen

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Steam Electric Combustion Residual Leachate Overview

- In 2015, EPA promulgated new technology-based effluent limitations guidelines and standards (ELGs) which supplanted and revised many, but not all, provisions of the preexisting ELG rule, which was promulgated in 1982.
- In 2019, the Fifth Circuit vacated the 2015 Rule limitations for two wastestreams: combustion residual leachate and legacy wastewater (“SWEPCO” decision).
- The 2015 Rule set the limits for these wastestreams equal to the 1982 limits, which the court ruled was arbitrary and violated the Clean Water Act.
- Vacatur of the 2015 BAT leachate limits raised the question of whether the Merrimack permit’s limits should be based on an interpretation of the 1982 ELG rule that:
 - A.) it effectively established BAT limits equal to the BPT limits for leachate (our current position), OR
 - (B) it did not promulgate BAT limits for leachate, leaving them to be developed in the permit on a site-specific, Best Professional Judgement (“BPJ”) basis
- Political leadership in the prior administration chose the former approach (A).
- Environmental Petitioners argue that, as a result of the vacatur in SWEPCO, more stringent permit limits should have been set for Merrimack’s leachate discharges based on a site-specific, BPJ application of the BAT standard.

Ex. 5 Deliberative Process (DP)

- EPA has indicated, through the Unified Regulatory Agenda, that the Agency may conduct a rulemaking to address these wastestreams. However, we have

Ex. 5 Deliberative Process (DP)

- Options for moving forward on this

Ex. 5 Deliberative Process (DP)

Ex. 5 Deliberative Process (DP)

Appointment

From: Reed, Kristen [Reed.Kristen@epa.gov]
Sent: 6/10/2021 3:20:12 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Wood, Robert [Wood.Robert@epa.gov]; Nagle, Deborah [Nagle.Deborah@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; Huff, Lisa [Huff.Lisa@epa.gov]; Benware, Richard [Benware.Richard@epa.gov]; Flanders, Phillip [Flanders.Phillip@epa.gov]; Covington, James [Covington.James@epa.gov]; Allen, Ashley [Allen.Ashley@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]; Zomer, Jessica [Zomer.Jessica@epa.gov]; Scozzafava, MichaelE [Scozzafava.MichaelE@epa.gov]
CC: Weyer, Erica [weyer.eric@epa.gov]; Reed, Kristen [Reed.Kristen@epa.gov]; Patrick, Monique [Patrick.Monique@epa.gov]
Subject: Steam Electric
Attachments: 20210614 Steam Briefing Memo.docx; 20210614 Agenda.docx; Steam Follow-Up Analysis Memo 20210514.docx
Location: Microsoft Teams Meeting
Start: 6/14/2021 5:00:00 PM
End: 6/14/2021 6:00:00 PM
Show Time As: Tentative

Required Attendees: Hoffer, Melissa; Wood, Robert; Nagle, Deborah; Damico, Brian; Huff, Lisa; Benware, Richard; Flanders, Phillip; Covington, James; Allen, Ashley; Neugeboren, Steven; Levine, MaryEllen; Zomer, Jessica; Scozzafava, MichaelE
Optional Attendees: Weyer, Erica; Reed, Kristen; Patrick, Monique

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Appointment

From: Owscheduling [Owscheduling@epa.gov]
Sent: 6/17/2021 4:30:11 PM
To: Fox, Radhika [Fox.Radhika@epa.gov]; Best-Wong, Benita [Best-Wong.Benita@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Nagle, Deborah [Nagle.Deborah@epa.gov]; Wood, Robert [Wood.Robert@epa.gov]; Scozzafava, MichaelE [Scozzafava.MichaelE@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; Benware, Richard [Benware.Richard@epa.gov]; Huff, Lisa [Huff.Lisa@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]; Zomer, Jessica [Zomer.Jessica@epa.gov]; Flanders, Phillip [Flanders.Phillip@epa.gov]; Allen, Ashley [Allen.Ashley@epa.gov]; Covington, James [Covington.James@epa.gov]
CC: Weyer, Erica [weyer.eric@epa.gov]; Skane, Elizabeth [Skane.Elizabeth@epa.gov]; Aguirre, Janita [Aguirre.Janita@epa.gov]

Subject: Steam Electric 2020 Rule Decision for Reconsideration
Attachments: Request 198 - Steam Electric 2020 Rule Decision for Reconsideration.pdf
Location: Microsoft Teams Meeting

Start: 6/22/2021 4:00:00 PM
End: 6/22/2021 5:00:00 PM
Show Time As: Tentative

Required Attendees: Fox, Radhika; Benita Best-Wong; Hoffer, Melissa; Nagle, Deborah; Wood, Robert (Wood.Robert@epa.gov); Scozzafava, MichaelE; Damico, Brian; Benware, Richard; Huff, Lisa; Neugeboren, Steven; Levine, MaryEllen; Zomer, Jessica; Flanders, Phillip; Allen, Ashley; Covington, James
Optional Attendees: Weyer, Erica; Skane, Elizabeth; Aguirre, Janita

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Appointment

From: Owscheduling [Owscheduling@epa.gov]
Sent: 6/23/2021 3:39:12 PM
To: Fox, Radhika [Fox.Radhika@epa.gov]; Best-Wong, Benita [Best-Wong.Benita@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Nagle, Deborah [Nagle.Deborah@epa.gov]; Wood, Robert [Wood.Robert@epa.gov]; Scozzafava, MichaelE [Scozzafava.MichaelE@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; Benware, Richard [Benware.Richard@epa.gov]; Huff, Lisa [Huff.Lisa@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]; Zomer, Jessica [Zomer.Jessica@epa.gov]; Flanders, Phillip [Flanders.Phillip@epa.gov]; Allen, Ashley [Allen.Ashley@epa.gov]; Covington, James [Covington.James@epa.gov]; Cassidy, Alison [Cassady.Alison@epa.gov]
CC: Weyer, Erica [weyer.eric@epa.gov]; Skane, Elizabeth [Skane.Elizabeth@epa.gov]; Aguirre, Janita [Aguirre.Janita@epa.gov]
Subject: Steam Electric 2020 Rule Decision for Reconsideration
Attachments: Request 198 - Steam Electric 2020 Rule Decision for Reconsideration.pdf; Steam Electric ELG Administrator Memo 20210621 final.docx; Steam Electric ELGs Administrator Briefing_20210623 updated.pptx; Draft Steam Briefing Opening TPs 20210623 updated.docx
Location: Microsoft Teams Meeting
Start: 6/24/2021 2:30:00 PM
End: 6/24/2021 3:00:00 PM
Show Time As: Tentative

Required Attendees: Fox, Radhika; Best-Wong, Benita; Hoffer, Melissa; Nagle, Deborah; Wood, Robert (Wood.Robert@epa.gov); Scozzafava, MichaelE; Damico, Brian; Benware, Richard; Huff, Lisa; Neugeboren, Steven; Levine, MaryEllen; Zomer, Jessica; Flanders, Phillip; Allen, Ashley; Covington, James; Cassidy, Alison
Optional Attendees: Weyer, Erica; Skane, Elizabeth; Aguirre, Janita

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LEGAL CONSIDERATIONS FOR REVIEW OF STEAM ELECTRIC EFFLUENT GUIDELINES

- I. ISSUE:** What are the legal considerations related to review of the 2020 “Steam Electric Reconsideration Rule,” identified as one of the actions that EPA will review pursuant to Executive Order 13990, “Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis, 86 Fed. Reg. 7037 (Jan. 20, 2021).
- Pursuant to direction from EPA’s Acting General Counsel, EPA received an abeyance until May 25, 2021, in the environmental group challenges to the 2020 rule pending in the Fourth Circuit.
 - Industry challenges to the 2015 steam electric rule are currently in abeyance in the Fifth Circuit pending judicial review of the 2020 rule.

II. ENVIRONMENTAL OVERVIEW:

- When EPA revised the steam electric effluent limitations guidelines and standards (ELGs) in 2015, it noted that the steam electric power plants contribute the greatest amount of all toxic pollutants discharged to surface waters by industrial categories regulated under the Clean Water Act. For this reason, it has been a high priority for NGO stakeholders to have these ELGs reflect the latest technological advances (see below).
- After several decades without revisions, EPA revised the ELGs in 2015 (which was estimated to reduce pollutant discharges from the industry by 1.4 billion pounds), and it partially reconsidered and revised the ELGs again in 2020. Both rules address discharges of toxic pollutants including selenium, arsenic and mercury, as well as nutrients.
- Neither rule limits discharges of bromides that may form carcinogenic disinfection by-products at downstream drinking water facilities, except through a voluntary program.

III. ENVIRONMENTAL JUSTICE ASPECTS OF THE RULE:

- EPA conducted an Environmental Justice (EJ) analysis for the 2015 and 2020 rules under Executive Order 12898.
- For the 2015 rule, EPA explained that, due to their close proximity to these discharges and relatively high consumption of fish, some minority and low-income communities have greater exposure to, and are therefore at greater risk from, pollutants in steam electric power plant discharges. EPA found that the rule increased the level of environmental protection (reduced adverse human health and environmental effects) for all affected populations, including minority and low-income populations. Furthermore, EPA estimated that minority and low-income populations would receive, proportionately, more of the human health benefits associated with the final rule.
- For the 2020 rule, using the 2015 rule as a baseline, EPA stated, “Overall, the various analyses showed that estimated environmental changes under the . . . [final rule] may affect

minority and/or low income populations to different degrees across environmental media, exposure pathways, and over time, but that the estimated effects (positive or negative) of the changes will be small.” One reason that EPA estimated some benefits to minority and/or low income populations under the rule was that it forecasted that some plants would choose to participate in a voluntary program with more stringent requirements (as their least-cost alternative). Environmental groups had significant comments on the EJ analysis done for this rule and overall did not believe the analysis did enough to identify and analyze impacts on EJ communities.

IV. STAKEHOLDERS:

- **Environmental groups:** Ex. 5 AC/DP

Ex. 5 AC/DP
- **Industry Groups:** Ex. 5 AC/DP

Ex. 5 AC/DP
- **Drinking Water Utilities:** Ex. 5 AC/DP

Ex. 5 AC/DP
- **States/Tribes:** Ex. 5 AC/DP

Ex. 5 AC/DP

V. **LITIGATION BACKGROUND AND STATUS:**

2015 Rule Litigation and Reconsideration by the last Administration:

- Seven petitions for review of the 2015 rule were filed by industry, environmental group, and drinking water utility petitioners and consolidated in the Fifth Circuit Court of Appeals. *Southwestern Electric Power Co., et al. v. EPA*, Case No. 15-60821 (5th Cir.). Not all aspects of the rule were challenged (*i.e.*, fly ash transport water limits, flu gas mercury control wastewater limits, subcategories, New Source Performance Standards/Pretreatment Standards for New Sources).
- On Apr. 24, 2017, the Court granted EPA’s request to hold the case in abeyance pending EPA’s review of the 2015 rule, in light of two petitions for reconsideration submitted by the Utility Water Act Group and the Small Business Association.
- On Aug. 22, 2017, the Court granted EPA’s motion to sever and hold in abeyance aspects of the litigation relating to the parts of the 2015 rule that EPA intended to reconsider (*i.e.*, bottom ash transport water and flue gas desulfurization (FGD) wastewater for existing sources). The Court later issued a briefing schedule related to environmental group petitioners’ claims in the case, which concerned wastestreams not being reconsidered by the Agency.
- On Apr. 12, 2019, the Court issued a decision vacating and remanding the 2015 combustion residual leachate regulations as unlawful under the Clean Water Act (under *Chevron* Step 1 and Step 2) and legacy wastewater regulations as arbitrary and capricious under the Administrative Procedure Act. The court cited and gave weight to an older body of caselaw articulating a fairly rigorous standard for Best Available Technology Economically Achievable (BAT) based on the language of Clean Water Act section 301(b) and the technology-forcing statutory structure, under which a driving factor for considering economics in determining BAT is achievability – what costs can be reasonably borne by the category or subcategory. *See Southwestern Elec. Power Co. (SWEPCO) v. EPA*, 920 F.3d 999, 1006 (5th Cir. 2019) (“When pollutants are regulated under this [BAT] standard, the EPA ‘must set discharge limits that reflect the amount of pollutant that would be discharged by a point source employing the best available technology that the EPA determines to be economically feasible across the category or subcategory as a whole.’ We have held that BAT limitations must ‘be based on the performance of the single best-performing plant in an industrial field.’”) (quoting *Texas Oil & Gas Ass’n v. EPA*, 161 F.3d 923, 928 (5th Cir. 1998) and *Chem. Mfrs. Ass’n v. EPA*, 870 F.2d 177, 226 (5th Cir. 1989)).
- The final Steam Electric Reconsideration Rule was published in the Federal Register at 85 Fed. Reg. 64,650 (Oct. 13, 2020).
- On Dec. 23, 2020, environmental group-intervenors moved to dismiss industry’s 2015 rule claims. EPA opposed the motion on Jan. 11, 2021, on the grounds that the court should avoid an unnecessary resolution of the mootness issue at this time and continue to hold the case in abeyance until judicial review of the 2020 rule is complete.

- On Mar. 25, 2021, the Court denied the motion to dismiss industry’s petitions for review of the 2015 rule for lack of jurisdiction (mootness) and ordered that industry petitioners’ claims be held in abeyance pending judicial review of the 2020 rule.

2020 Rule Litigation:

- Two petitions for review were filed and consolidated in the Fourth Circuit on Nov. 19, 2020. *Appalachian Voices et al. v. EPA*, No. 20-2187 (4th Cir.). One petition was filed by Clean Water Action; Environmental Integrity Project; Sierra Club; Waterkeeper Alliance, Inc.; Natural Resources Defense Council, Inc.; Center for Biological Diversity; PennEnvironment, Inc.; Chesapeake Climate Action Network; and Prairie Rivers Network. The other petition was filed by Appalachian Voices; Good Stewards of Rockingham; Stokes County Branch of the NAACP; and Winyah Rivers Alliance.
- EPA filed a certified index to the record on Dec. 18, 2020.
- An industry trade group (UWAG) and certain energy companies (Electric Energy, Inc.; Coletto Creek Power, LLC; Dynegy Miami Fort, LLC; Dynegy Midwest Generation, LLC; Dynegy Zimmer, LLC; Illinois Power Generating Company; Illinois Power Resources Generating, LLC; and Kincaid Generation, LLC) moved to intervene in the litigation, which the court granted on Dec. 3, 2020. UWAG also filed a motion to transfer the litigation to the Fifth Circuit. Environmental groups opposed the motion and EPA took no position. The Court has not yet ruled on it.
- On Mar. 1, 2021, the Court granted EPA’s motion to hold the case in abeyance until May 25, 2021, to allow time for EPA to review the rule pursuant to E.O. 13990.

VI. OVERVIEW OF THE 2020 RULE DECISIONS, LIKELY CHALLENGES TO THE RULE, AND LEGAL RISK ASSESSMENT

To inform the Agency’s review of the 2020 rule, we review below major decisions made in the rule for the two wastestreams at issue (FGD wastewater and bottom ash) and the three subcategories established by the rule.

Ex. 5 AC/DP

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Ex. 5 AC/DP

Ex. 5 AC/DP

Ex. 5 AC/DP

Ex. 5 AC/DP

Ex. 5 AC/DP

Message

From: Hoffer, Melissa [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=B497C7C804FB41E3BC952E3007F27870-HOFFER, MEL]
Sent: 5/12/2021 2:26:14 PM
To: Zomer, Jessica [Zomer.Jessica@epa.gov]
CC: Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]; OGC Immediate Office Support [OGCFrontOfficeSupportStaff@epa.gov]
Subject: RE: Steam Electric -expiration of abeyance on May 25 - **Ex. 5 AC/DP**

Thanks.

From: Zomer, Jessica <Zomer.Jessica@epa.gov>
Sent: Wednesday, May 12, 2021 10:22 AM
To: Hoffer, Melissa <Hoffer.Melissa@epa.gov>
Cc: Neugeboren, Steven <Neugeboren.Steven@epa.gov>; Levine, MaryEllen <levine.maryellen@epa.gov>; OGC Immediate Office Support <OGCFrontOfficeSupportStaff@epa.gov>
Subject: Steam Electric -expiration of abeyance on May 25 - **Ex. 5 AC/DP**

Melissa,

Ex. 5 AC/DP

Thanks,
Jessica

Begin forwarded message:

From: "Zomer, Jessica" <Zomer.Jessica@epa.gov>
Date: May 4, 2021 at 11:38:00 AM EDT
To: "Hoffer, Melissa" <Hoffer.Melissa@epa.gov>
Cc: "Neugeboren, Steven" <Neugeboren.Steven@epa.gov>, "Levine, MaryEllen" <levine.maryellen@epa.gov>
Subject: Steam Electric -expiration of abeyance on May 25 - requesting feedback on possible
Ex. 5 AC/DP

Melissa,

I'm writing to get your feedback by the end of this week on whether we should seek

Ex. 5 AC/DP

Ex. 5 AC/DP

If you'd like to chat with me or Mary Ellen about this, you can reach us through Teams or at
Ex. 6 Personal Privacy (PP) (Jessica) or (202) 564-1345 (Mary Ellen).

Many thanks,

Jessica Hall Zomer

Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW, Mail Code 2355A, Washington, DC 20460
Tel. (202) 564-3376 | zomer.jessica@epa.gov

Jessica Hall Zomer

Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW, Mail Code 2355A, Washington, DC 20460
Tel. (202) 564-3376 | zomer.jessica@epa.gov

Message

From: Hoffer, Melissa [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=B497C7C804FB41E3BC952E3007F27870-HOFFER, MEL]
Sent: 8/4/2021 12:41:57 AM
To: Cassidy, Alison [Cassady.Alison@epa.gov]
Subject: RE: Follow up

Good.

No, conflicted.

From: Cassidy, Alison <Cassady.Alison@epa.gov>
Sent: Tuesday, August 3, 2021 8:37 PM
To: Hoffer, Melissa <Hoffer.Melissa@epa.gov>
Subject: Re: Follow up

Thank you! So helpful.

Did you work on the Clean Water Act 401 rule decision as well?

Alison L. Cassady
(202) 941-6036

On Aug 3, 2021, at 8:29 PM, Hoffer, Melissa <hoffer.melissa@epa.gov> wrote:

Allison, this will follow our discussion earlier today.

For reference, here is what we said in the Comms TPs:

“The 2020 rule is only one part of the regulatory picture. The 2020 rule made modifications to only certain aspects of the 2015 Steam Electric Effluent Limitation Guidelines rule such that the current requirements are based on these two relatively recent rulemakings. And the current requirements are much better than the outdated 1982 regulations that would otherwise be in effect.”

This is accurate insofar as the 2020 and 2015 rules together are more protective than the pre-existing 1982 framework. However, the statement has been interpreted to mean that **Ex. 5 AC/DP**

Ex. 5 AC/DP

Let me know if you need anything else.

M

Melissa A. Hoffer
Acting General Counsel
Principal Deputy General Counsel
U.S. Environmental Protection Agency
Office of General Counsel
1200 Pennsylvania Avenue, NW
Washington, DC 20460
T: 202.440.1671
E: hoffer.melissa@@epa.gov

Message

From: Hoffer, Melissa [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=B497C7C804FB41E3BC952E3007F27870-HOFFER, MEL]
Sent: 8/4/2021 12:51:18 PM
To: Levine, MaryEllen [levine.maryellen@epa.gov]; Zomer, Jessica [Zomer.Jessica@epa.gov]
CC: Neugeboren, Steven [Neugeboren.Steven@epa.gov]
Subject: RE: Follow up

Thank you.

From: Levine, MaryEllen <levine.maryellen@epa.gov>
Sent: Wednesday, August 4, 2021 8:25 AM
To: Hoffer, Melissa <Hoffer.Melissa@epa.gov>; Zomer, Jessica <Zomer.Jessica@epa.gov>
Cc: Neugeboren, Steven <Neugeboren.Steven@epa.gov>
Subject: RE: Follow up

Melissa,

This seems accurate to me. Ex. 5 AC/DP
Ex. 5 AC/DP

- Mary Ellen

Mary Ellen Levine
Assistant General Counsel for Technology & Wet Weather
Water Law Office, Office of General Counsel, U.S. EPA
202 564-1345

From: Hoffer, Melissa <Hoffer.Melissa@epa.gov>
Sent: Tuesday, August 3, 2021 6:04 PM
To: Zomer, Jessica <Zomer.Jessica@epa.gov>
Cc: Levine, MaryEllen <levine.maryellen@epa.gov>
Subject: Follow up

Jessica—here is my understanding based on our conversation. Let me know if any of this is not accurate. Thanks.

For reference, here is what we said in the Comms TPs:

“The 2020 rule is only one part of the regulatory picture. The 2020 rule made modifications to only certain aspects of the 2015 Steam Electric Effluent Limitation Guidelines rule such that the current requirements are based on these two relatively recent rulemakings. And the current requirements are much better than the outdated 1982 regulations that would otherwise be in effect.”

This is accurate insofar as the 2020 and 2015 rules together are more protective than the pre-existing 1982 framework. However, the statement has been

Ex. 5 AC/DP

Ex. 5 AC/DP

Melissa A. Hoffer
Acting General Counsel
Principal Deputy General Counsel
U.S. Environmental Protection Agency
Office of General Counsel
1200 Pennsylvania Avenue, NW
Washington, DC 20460
T: 202.440.1671
E: hoffer.melissa@@epa.gov

Appointment

From: Patrick, Monique [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=3F271920363C4AECBFF1E989A6DFDE9B-MPATRICK]
Sent: 5/18/2021 7:18:51 PM
To: Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Garbow, Avi [Garbow.Avi@epa.gov]; Best-Wong, Benita [Best-Wong.Benita@epa.gov]; Nagle, Deborah [Nagle.Deborah@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]; Zomer, Jessica [Zomer.Jessica@epa.gov]; Tsuki.hoshijima@usdoj.gov; tcmar@earthjustice.org; jgonzalez@earthjustice.org; lperetto@earthjustice.org; mozaeta@earthjustice.org; lpiette@earthjustice.org; casey.roberts@sierraclub.org; joshua.smith@sierraclub.org; hconnor@biologicaldiversity.org; bhartl@biologicaldiversity.org; aruss@environmentalintegrity.org; jpeters@cleanwater.org; jdevine@nrdc.org; lgriffith@selcnc.org; fholleman@selcnc.org; agarcia@selctn.org; mkimball@selcnc.org; Payne, James [payne.james@epa.gov]
CC: Gibson, Neshawne [Gibson.Neshawne@epa.gov]; Shaw, Carla [Shaw.Carla@epa.gov]; Patrick, Monique [Patrick.Monique@epa.gov]
Subject: Steam Electric Reconsideration Rule
Location: Microsoft Teams Meeting
Start: 5/24/2021 2:30:00 PM
End: 5/24/2021 3:30:00 PM
Show Time As: Busy

Required Attendees: Garbow, Avi; Best-Wong, Benita; Nagle, Deborah; Neugeboren, Steven; Levine, MaryEllen; Zomer, Jessica; Tsuki.hoshijima@usdoj.gov; tcmar@earthjustice.org; jgonzalez@earthjustice.org; lperetto@earthjustice.org; mozaeta@earthjustice.org; lpiette@earthjustice.org; casey.roberts@sierraclub.org; joshua.smith@sierraclub.org; hconnor@biologicaldiversity.org; bhartl@biologicaldiversity.org; aruss@environmentalintegrity.org; jpeters@cleanwater.org; jdevine@nrdc.org; lgriffith@selcnc.org; fholleman@selcnc.org; agarcia@selctn.org; mkimball@selcnc.org; Payne, James
Optional Attendees: Gibson, Neshawne; Shaw, Carla; Patrick, Monique

POC: Monique Patrick

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Appointment

From: Best-Wong, Benita [Best-Wong.Benita@epa.gov]
Sent: 4/22/2021 6:47:19 PM
To: Best-Wong, Benita [Best-Wong.Benita@epa.gov]; Nagle, Deborah [Nagle.Deborah@epa.gov]; Wood, Robert [Wood.Robert@epa.gov]; Scozzafava, MichaelE [Scozzafava.MichaelE@epa.gov]; Huff, Lisa [Huff.Lisa@epa.gov]; Benware, Richard [Benware.Richard@epa.gov]; Covington, James [Covington.James@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]; Zomer, Jessica [Zomer.Jessica@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Flanders, Phillip [Flanders.Phillip@epa.gov]; Allen, Ashley [Allen.Ashley@epa.gov]; Weyer, Erica [weyer.eric@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]
CC: Reed, Kristen [Reed.Kristen@epa.gov]
Subject: Steam Electric ELG
Attachments: Administrator Briefing Memo Steam 15APR2021 clean.docx; Administrator Briefing Memo Steam 14APR2021 Attach4.docx; Administrator Briefing Memo Steam 09APR2021 Attach1.docx; Administrator Briefing Memo Steam 08APR2021 Attach3.docx; Administrator Briefing Memo Steam 09APR2021 Attach2.docx
Location: Microsoft Teams Meeting
Start: 4/27/2021 1:00:00 PM
End: 4/27/2021 2:00:00 PM
Show Time As: Busy

Required Attendees: Nagle, Deborah; Wood, Robert; Scozzafava, MichaelE; Huff, Lisa; Benware, Richard; Covington, James; Levine, MaryEllen; Zomer, Jessica; Neugeboren, Steven; Flanders, Phillip; Allen, Ashley; Weyer, Erica; Damico, Brian; Hoffer, Melissa
Optional Attendees: Reed, Kristen

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Appointment

From: Best-Wong, Benita [Best-Wong.Benita@epa.gov]
Sent: 6/1/2021 6:28:08 PM
To: Best-Wong, Benita [Best-Wong.Benita@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Wood, Robert [Wood.Robert@epa.gov]; Nagle, Deborah [Nagle.Deborah@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; Huff, Lisa [Huff.Lisa@epa.gov]; Benware, Richard [Benware.Richard@epa.gov]; Flanders, Phillip [Flanders.Phillip@epa.gov]; Covington, James [Covington.James@epa.gov]; Allen, Ashley [Allen.Ashley@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]; Zomer, Jessica [Zomer.Jessica@epa.gov]; Scozzafava, MichaelE [Scozzafava.MichaelE@epa.gov]
CC: Weyer, Erica [weyer.eric@epa.gov]; Reed, Kristen [Reed.Kristen@epa.gov]; Patrick, Monique [Patrick.Monique@epa.gov]

Subject: Steam Electric
Attachments: Steam Follow-Up Analysis Memo 20210514.docx; 20210614 Agenda.docx; 20210614 Steam Briefing Memo b.docx
Location: Microsoft Teams Meeting

Start: 6/14/2021 5:00:00 PM
End: 6/14/2021 6:00:00 PM
Show Time As: Busy

Required Attendees: Hoffer, Melissa; Wood, Robert; Nagle, Deborah; Damico, Brian; Huff, Lisa; Benware, Richard; Flanders, Phillip; Covington, James; Allen, Ashley; Neugeboren, Steven; Levine, MaryEllen; Zomer, Jessica; Scozzafava, MichaelE
Optional Attendees: Weyer, Erica; Reed, Kristen; Patrick, Monique

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Appointment

From: Owscheduling [Owscheduling@epa.gov]
Sent: 2/2/2021 3:24:04 PM
To: Owscheduling [Owscheduling@epa.gov]; Fox, Radhika [Fox.Radhika@epa.gov]; Best-Wong, Benita [Best-Wong.Benita@epa.gov]; Goodin, John [Goodin.John@epa.gov]; Nagle, Deborah [Nagle.Deborah@epa.gov]; Wood, Robert [Wood.Robert@epa.gov]; Scozzafava, MichaelE [Scozzafava.MichaelE@epa.gov]; Huff, Lisa [Huff.Lisa@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; Benware, Richard [Benware.Richard@epa.gov]; Flanders, Phillip [Flanders.Phillip@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]; Zomer, Jessica [Zomer.Jessica@epa.gov]; Allen, Ashley [Allen.Ashley@epa.gov]; Covington, James [Covington.James@epa.gov]; Sabater, Juan [Sabater.Juan@epa.gov]; Lousberg, Macara [Lousberg.Macara@epa.gov]
CC: Weyer, Erica [weyer.eric@epa.gov]
Subject: Steam Electric Rule
Attachments: Steam Transition Briefing_20210208.pptx
Location: Microsoft Teams Meeting
Start: 2/9/2021 7:00:00 PM
End: 2/9/2021 7:45:00 PM
Show Time As: Busy

Required Attendees: Fox, Radhika; Benita Best-Wong; Goodin, John; Nagle, Deborah; Wood, Robert (Wood.Robert@epa.gov); Scozzafava.MichaelE@epa.gov; Huff, Lisa; Damico, Brian; Benware, Richard; Flanders, Phillip; Hoffer, Melissa; Steven Neugeboren; MaryEllen Levine; Zomer, Jessica; Allen, Ashley; Covington, James; Sabater, Juan; Lousberg, Macara
Optional Attendees: Weyer, Erica

Purpose of the meeting: Provide an overview of the Steam Electric Reconsideration (2020) Rule and current litigation in consideration for upcoming Brief due 2/24/2021.

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From: Fox, Radhika [Fox.Radhika@epa.gov]
Sent: 3/4/2021 7:33:04 PM
To: Fox, Radhika [Fox.Radhika@epa.gov]; Best-Wong, Benita [Best-Wong.Benita@epa.gov]; Nagle, Deborah [Nagle.Deborah@epa.gov]; Wood, Robert [Wood.Robert@epa.gov]; Scozzafava, MichaelE [Scozzafava.MichaelE@epa.gov]; Huff, Lisa [Huff.Lisa@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; Pritts, Jesse [Pritts.Jesse@epa.gov]; Benware, Richard [Benware.Richard@epa.gov]; Flanders, Phillip [Flanders.Phillip@epa.gov]; Lewis, Samantha [Lewis.Samantha@epa.gov]; Siddiqui, Ahmar [Siddiqui.Ahmar@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]; Zomer, Jessica [Zomer.Jessica@epa.gov]; Corona, Joel [Corona.Joel@epa.gov]; Whitlock, Steve [Whitlock.Steve@epa.gov]
CC: Tiago, Joseph [Tiago.Joseph@epa.gov]; Laija, Emerald [Laija.Emerald@epa.gov]; Weyer, Erica [weyer.eric@epa.gov]; Sabater, Juan [Sabater.Juan@epa.gov]
Subject: Steam Electric - ELG
Attachments: Steam Transition Briefing_20210208.pptx; ELG Baseball Cards 20210305_final.pptx; Steam Electric AAA briefing 2021-03-10.docx
Location: Microsoft Teams Meeting
Start: 3/10/2021 4:00:00 PM
End: 3/10/2021 4:45:00 PM
Show Time As: Busy

Required Attendees: Benita Best-Wong; Nagle, Deborah; Wood, Robert (Wood.Robert@epa.gov); Scozzafava.MichaelE@epa.gov; Huff, Lisa; Damico, Brian; Pritts, Jesse; Benware, Richard; Flanders, Phillip; Lewis, Samantha; Siddiqui, Ahmar; Hoffer, Melissa; Neugeboren, Steven; Levine, MaryEllen; Zomer, Jessica; Corona, Joel; Whitlock, Steve
Optional Attendees: Tiago, Joseph; Laija, Emerald; Weyer, Erica; Sabater, Juan

Purpose of the meeting: Provide an overview of the Effluent Limit Guidelines (ELG) Program and other potential opportunities for ELG rulemakings to inform decisions regarding the Steam Electric Reconsideration Rule (2020) and discuss options for next steps.

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Appointment

From: Owscheduling [Owscheduling@epa.gov]
Sent: 8/4/2021 5:56:47 PM
To: Owscheduling [Owscheduling@epa.gov]; Nagle, Deborah [Nagle.Deborah@epa.gov]; Wood, Robert [Wood.Robert@epa.gov]; Scozzafava, MichaelE [Scozzafava.MichaelE@epa.gov]; Huff, Lisa [Huff.Lisa@epa.gov]; Damico, Brian [Damico.Brian@epa.gov]; Benware, Richard [Benware.Richard@epa.gov]; Covington, James [Covington.James@epa.gov]; Levine, MaryEllen [levine.maryellen@epa.gov]; Neugeboren, Steven [Neugeboren.Steven@epa.gov]; Hoffer, Melissa [Hoffer.Melissa@epa.gov]; Zomer, Jessica [Zomer.Jessica@epa.gov]; Fox, Radhika [Fox.Radhika@epa.gov]; Best-Wong, Benita [Best-Wong.Benita@epa.gov]; Cisar, Elizabeth [Cisar.Elizabeth@epa.gov]; Hewitt, Julie [Hewitt.Julie@epa.gov]; Hessenauer, Meghan [Hessenauer.Meghan@epa.gov]; Tripp, Anthony [Tripp.Anthony@epa.gov]; Monsarrat, Julia [Monsarrat.Julia@epa.gov]
CC: Weyer, Erica [weyer.eric@epa.gov]; Skane, Elizabeth [Skane.Elizabeth@epa.gov]; Sabater, Juan [Sabater.Juan@epa.gov]; Aguirre, Janita [Aguirre.Janita@epa.gov]; Trombley, Michael [Trombley.Michael@epa.gov]; Akopian, Natalia [akopian.natalia@epa.gov]; Penman, Crystal [Penman.Crystal@epa.gov]
Subject: Steam Electric ELG Early Guidance
Attachments: Request 207 - Steam Electric ELG Early Guidance.pdf; Steam Electric ELG Early Guidance 20210813.pptx
Location: Microsoft Teams Meeting

Start: 8/16/2021 5:00:00 PM
End: 8/16/2021 5:45:00 PM
Show Time As: Busy

Required Attendees: Nagle, Deborah; Wood, Robert; Scozzafava, MichaelE; Huff, Lisa; Damico, Brian; Benware, Richard; Covington, James; Levine, MaryEllen; Neugeboren, Steven; Hoffer, Melissa; Zomer, Jessica; Fox, Radhika; Best-Wong, Benita; Cisar, Elizabeth; Hewitt, Julie; Hessenauer, Meghan; Tripp, Anthony; Monsarrat, Julia
Optional Attendees: Weyer, Erica; Skane, Elizabeth; Sabater, Juan; Aguirre, Janita; Trombley, Michael; Akopian, Natalia; Penman, Crystal

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